AN ARCHITECTURAL AND CONCEPTUAL ANALYSIS OF MESOPOTAMIAN TEMPLES FROM THE UBAID TO THE OLD BABYLONIAN PERIOD

A Master's Thesis

by
AMIR H. SOUDIPOUR

THE DEPARTMENT OF ARCHAEOLOGY
AND HISTORY OF ART
BILKENT UNIVERSITY
ANKARA

February 2007

To my family

AN ARCHITECTURAL AND CONCEPTUAL ANALYSIS OF MESOPOTAMIAN TEMPLES FROM THE UBAID TO THE OLD BABYLONIAN PERIOD

The Institute of Economics and Social Sciences
of
Bilkent University

by
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In Partial Fulfillment of the Requirements for the Degree of
MASTER OF ARTS

in
THE DEPARTMENT OF ARCHAEOLOGY
AND HISTORY OF ART
BILKENT UNIVERSITY
ANKARA

February 2007

I certify that I have read this thesis and that it is fully adequate, in scope and quality, as a thesis for the degree of Master of Arts in the Department of Archaeology and History of Art.

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ABSTRACT

AN ARCHITECTURAL AND CONCEPTUAL ANALYSIS OF MESOPOTAMIAN TEMPLES FROM THE UBAID TO THE OLD BABYLONIAN PERIOD

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This study attempts to explore the architecture of Mesopotamian temples from the Ubaid to the Old Babylonian period. It analyses the ways in which the layout of the temples changed and developed through time. It argues how different factors such as ideology, cosmology, religion and environment were reflected in the architecture and function of temple complexes. The thesis also looks closely at the concept of the temple as the house of god, and by comparing the selected temples of different periods to the domestic architecture of the same period, aims to trace the influence and reflection of the domestic structure on the sacred structure and to determine in which period the structural similarity reaches its zenith and declines. Changes in Mesopotamia's social organization can be linked to these changes in temple layout.

Keywords: Mesopotamia, Temple, House, The temple as the house, Ideology, Religion, Cosmology, Environment.

ÖZET

OBEYD DÖNEMİNDEN ESKİ BABİL DÖNEMİNE MEZOPOTAMYA TAPINAKLARININ MİMARİ VE KAVRAMSAL BİR ANALİZİ

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Şubat 2007

Bu çalışmada Ubeyd döneminden Eski Babil dönemine Mezopotamya tapınaklarının mimarisi incelenmektedir. Çalışmada bu tapınakların planlarının zaman içerisinde nasıl değiştikleri analiz edilmekte, ideoloji, kozmoloji, din ve çevre gibi etkenlerin tapınakların mimarisine ve kullanımına nasıl yansıdığı analiz edilmektedir. Tezde, tanrının evi olarak tapınak kavramı da yakından incelenmekte, farklı dönemlerden seçilen tapınakları o dönemin yerel mimarisi ile karşılaştırarak yerel yapının kutsal yapı üzerindeki etkilerinin ve bu yapı üzerine yansımalarının izi sürülmekte ve hangi dönemde bu yapısal benzerliğin tepe noktaya ulaştığı ve düşüşe geçtiği belirlenmeye çalışılmaktadır. Mezopotamya'nın sosyal yapılanmasındaki değişikliklerin tapınak mimarisine ve yapısına da yansıdığı iddia edilmektedir.

Anahtar Kelimeler: Mezapotamya, Tapınak, Ev, Ev olarak tapınak, İdeoloji, Din, Kozmoloji, Çevre.

ACKNOWLEDGEMENTS

First of all, I would like to express my special gratitude to my thesis advisor, Dr. Marie-Henriette Gates, for her invaluable guidance, constant help and patience. I would like to express my thanks to the thesis committee members, Dr. Jacques Morin and Dr. Geoffrey Summers. I also would like to thank my teachers in the department, Dr. İlknur Özgen, Dr. Julian Bennett, Dr. Charles Gates, Dr. Yaşar Ersoy, Asuman Coşkun Abuagla and Ben Claasz Coockson.

I am also very grateful to my family for their support and patience.

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CHAPTER 1

INTRODUCTION

Architecture is a monumental art form that is both functional and conceptual. As function and concept are related with one another, and concept does not constantly have to be intellectually defined, architecture contains both. It is the only art form that human beings can both experience spatially and through it visualize the journey in the conceptual island of space and time. In this journey the architecture alone can not carry any significance; rather it is completely connected to the different individuals and communities, the memories that create the specific buildings so special for "*spectator"*, as people and architecture can not be separated. Human beings make the architecture and then interpret it, as Emerson says the Sphinx must solve her own riddle.

The subject of this thesis is not far away from this journey, and actually it fits within the same concept of space and time. This thesis attempts to investigate the architecture of temples in Mesopotamia in specific periods (Ubaid, Protoliterate Period, Early Dynastic Period and Old Babylonian) chosen to highlight significant contrasts in architectural approach. It will not simply define the features of these buildings, but will relate these features to the conceptual dimension behind them.

This thesis will examine the architectural design of the temples, including the layout and orientation of the buildings, their locations, design elements that appear in

both the interior and exterior of the structure, lighting and ventilation and construction materials.

Moreover, it will attempt to investigate the function of architectural spaces and elements, and finally the furnishings of Mesopotamian temples. Architectural spaces such as room, structural elements such as buttresses, and furnishings such as offering tables will be analyzed closely since these architectural features may differ from temple to temple according to their concept and their specific deities. In order to define the architecture of the temple and the conceptual meaning that lies behind it, one must first identify their gods and the temple's role in Mesopotamian culture and society. One must look at Mesopotamian religion as a conceptual phenomenon in which the temple represents the god's dwelling place. Moreover, on occasion, the temples worked as administration centers and owned the land and controlled the economy, the cultivation and social features of the society. So under these circumstances, the temples were the focus of the community and the core of the city.

This thesis will begin at Abu Shahrein, ancient Eridu, where the successive phases of a Ubaid temple have been recovered. It will then cover the Uruk Protoliterate period Temple at Uqair, the Sin Temple at Khafajah, the Temple Oval at Khafajah and the Temple of Ishtar Kititum at Ishchali. These temples will be presented chronologically, each one illustrating significant characteristics for its period.

Mainly the evidence for this thesis is based on two classes of data, i.e. archaeological and textual. The archaeological evidence consists of the remnants of structures, mostly confined to the ground plan, which served as cult places, e.g. shrines, temples, and objects of worship. Textual evidence consists of tablets and

inscriptions that provide information about politics, religion, the economy, language and social behavior.

Because the architectural evidence and design elements of some temples have been destroyed, I will refer to textual evidence or small finds such as seals to reconstruct the superstructure of the buildings. Since most of the temples chosen for this thesis have complete plans, their layout, lighting, orientation and location are easily approachable.

The impact of the temples on both natural and artificial environment (i.e., society) is also discussed. The environment of these temples is a subject that was never seriously taken under consideration. Here I intend to declare the importance of this subject matter, its impact on the temples and in consequence the impact of the temples on the environment.

This thesis consists of three chapters. The first chapter presents the physical description of the temples. The second chapter analyzes the ideology that determined the layout and function of each temple, and the staff and deity who lived there. Moreover, it discusses the position of the landscape and impact of it on religion and in consequence the religion impact on the landscape and the concept of sacred place in Mesopotamia compared with other places such as Greece and Syria. The third chapter will compare the temple of each period with the factors under which the temples changed and were shaped in order to understand the environmental consequences and social and political impacts on it. In addition, it explores the way that temples differed and shared similarities with their surrounding domestic and secular buildings. This comparison aims to explore how Mesopotamian ideology and the concept of temple as the house of god reflected on the architecture of sacred structures in different periods. Finally, it examines the position of cult and the concept of cult statue.

CHAPTER 2

FIVE MESOPOTAMIAN TEMPLES

Mesopotamian temples, unlike the church or mosque, were not congregational spaces. The temples were the dwellings for gods and goddesses. The deities lived, ate and even bathed there. The deities had physical identities and would even visit their relatives, or leave their city to go live in another place when they were angry. Moreover on occasion the temples worked as administration centers and owned land and controlled the economy, cultivation and social features of the society. So under these circumstances, the temples were the focus of the community and the core of the city.

This chapter intends to describe the architecture and design of five temples: the sequence of Eridu temples, the Painted Temple at Uqair, the Sin Temple at Khafajah, the Temple Oval at Khafajah and the Temple of Ishtar Kititum at Ishchali. The temples will be discussed in chronological order. These temples have been chosen to illustrate successive developmental stages in Mesopotamian religious architecture.

2.1 Temples of Eridu

Tell Abu Shahrein or ancient Eridu is an irregular settlement which is located about 24 kms to the south- southwest of Ur. Nasiriyah is the closest modern town to the site (40 kms to the northeast of Eridu and located on the banks of the Euphrates). The area was inhabited constantly for a long time: it seems the earliest cultural phase

begins in the sixth millennium B.C., and the site was occupied until the end of the Achaemenid period in the 4th century B.C. (Safar, Lloyd, Mustafa, 1981: 30-31). Eridu also is known as one of the first Mesopotamian towns to be created, however it never had any political significance.[1] The Babylonian Creation Epic states:

"A reed had not come forth; a tree had not been created.

A house had not been made,

A city had not been made,

All the lands were sea,

Then Eridu was made" (Heidel, 1951: 62).

Lloyd suggests that "in relationship with Ur, the Ubaid shrine could by now have become a place of pilgrimage. Its remains are still visible from the summit of the Ur *Ziggurat* about four miles distant to the west, and it could from there easily have been visited in a day" (Lloyd, 1960: 30).

The following study gives us a good example of how the architecture of these temples developed and in some parts totally changed from the Ubaid to the Proliterate period. Abu Shahrein includes seven mounds; the existence of these mounds indicates that the settlement shifted in different periods. Mound No 1, which will be our concern (i.e., the temples and Ziggurat situated on mound No.1) and the location of the earliest inhabitants, is almost 580 x 540 m extending from North-West to South-East (Safar, Lloyd, Mustafa, 1981: 31).

According to the Sumerian texts, Eridu was on the seashore. The trace of ancient water to the southwest of the settlement may indicate that the settlement was on the shore of a great marsh. The hypothesis that Eridu was on the seashore cannot completely be rejected since the climate changed and the sea level in the fourth

[1] Eridu had no political importance except in the period of two kings i.e. Alalum and Alagar (Safar, Lloyd, Mustafa, 1981: 34).

millennium B.C. was higher than at present time, although Campbell Thompson declares: "I think that the fresh water mussel shells which I found in great quantity in different strata, when taken into consideration with the very few finds of marine shell will definitely compel us to give up the idea that Eridu was in ancient times actually on the sea-shore" (Safar, Lloyd, Mustafa, 1981: 33).

The main god of Eridu to which all the temples are dedicated was Enki, in Akkadian Ea. Enki personifies the god of the subterranean sweet water and also symbolizes the marsh land and rain (Jacobsen, 1976: 110). Enki is represented with, perhaps, the two rivers the Tigris and Euphrates; some illustrations show two streams coming out of his shoulder or from the vessel that he carries (Lambert, 1997: 5-6).

Enki also is the irrigation officer who with his exceptional wisdom and power contributes water in abundance to the alluvial land to make grain rise in plenty in the flat Arabian desert. It has been suggested that all the successive temples in Eridu were dedicated to this god or rather that they were the house of Enki.

Three seasons of excavation at Eridu in the late 1940s revealed a sequence of twelve temples (Fig. 3).[2] The temples were constructed in three different periods. Temples I, II, III, IV and V were Early Uruk temples, Temples VI, VII, VIII, IX and XI were constructed in the Ubaid period and finally temples XV and XVI were Early Ubaid structures.

Almost no remains of temples I and II are left, as it was buried under the foundation of a later Ziggurat which was built in the Ur III period. The only remains

[2] The first season was carried out in 1946, the second season in 1947 and the third season 1948. All seasons were directed by Sayyid Fuad Safar and Seton Lloyd. Earlier excavations were conducted by Taylor in the mid 19th century and later by Campbell Thompson in the early 20th century. Taylor discovered the statue of the famous lion of Eridu, however he did not remove it. In one of the buildings he perceived "the figure of a man holding a bird on his wrist, with a smaller figure near him in red paint" (Safar, Lloyd, Mustafa, 1981: 29-37).

from temples I, II, III, IV, V are a gypsum platform, on which the building was constructed.

The first architectural elements that indicate the first trace of human inhabitants in Eridu are four parallel walls. The walls were approximately three meters each in length. These walls made of mudbricks were located 10.90 meters beneath ground level; and 30 cm over the virgin soil related to earliest occupation, associated with level XVIII and might also have functioned as the first foundation for the earliest structure, temple XVII (Safar, Lloyd, Mustafa, 1981: 86).

Temple XVII (Fig. 4) is the earliest decipherable building in Eridu. The temple is a square building, with inside dimensions of its chamber at 2.80 m per side. The walls were built of mudbrick and all were unplastered. There is no trace of door or window on the walls of the building but as the north corner of the building had disappeared, it has been suggested that the door was located on the north corner of the chamber. The chamber is oriented North-West, South-East. Apparently the orientation of the cult does not change in the entire later sequence of temples. In the center of the southwest and northwest walls two projections were built, these two architectural elements were built for the placement of wooden beams which held the ceiling structure. Outside of the chamber next to the southwest wall, there is a circular oven or kiln 1.30 m in diameter. There is no evidence of an altar or offering table inside the structure. The only feature inside the building is a square pedestal made of mudbrick, 20 cm in height (Safar, Lloyd, Mustafa, 1981: 86). Analogy with later temples suggests that this pedestal supported the cult image.

Temple XVI (Fig. 5) was directly built over the remains of the previous temple. The structure is a rectangular building which has a small chamber on its northwestern wall, making it a cross-shaped structure. The walls of temple XVI are

more refined and made of mudbrick. Unlike the temple XVII the walls were plastered inside. The entrance door of the chamber was located on the south-east wall, slightly off-center closer to the west wall. Similar to temple XVII, there is a rectangular pedestal in the center of the structure which carries the trace of ashes and fire. In the southeastern walls next to the door jamb there are two projections, probably to reinforce the jambs. There are also two projections made of mudbrick, each 40 cm in width, on the center of the southwest and northeast walls. The latter assumedly was supporting the wooden beams of the ceiling. There are two features outside the building: one is a pedestal similar to the inner one which is located next to the entrance, and the other element is a circular oven located to the south. A cult platform 24 cm high appears in this building; the cult platform is rectangular and is located in the middle of a niche (Safar, Lloyd, Mustafa, 1981: 88).

Temple XV (Fig. 6) was initially not considered a temple but as it was built on the ruin of temple XVII must be regarded as one. The temple is a rectangular chamber, with the inside dimensions of 7.30 x 8.40 m. A wall was found parallel to the northwest wall of the temple; however I do not consider this wall as part of the building. The construction material of temple XV is unlike all other temples in Eridu.[3] The thickness of the walls differs from one to another; however the parallel walls have the same thickness. Southwest and northeast walls are thinner than the others: the northeast and southwest walls were built of two rows of the bricks, and the others were constructed of a single brick. There is a small compartment in the west corner of the building, and the southeast and northwest walls were supported by buttresses. There is also an outer oven next to the northeast wall. After temple XV there are no

[3] The construction material of the temple XV is an unusual type of mudbrick (liben), not used in other temples. “The bricks were handmade, apparently without any kind of mould, almost square in section and very long in proportion” (Lloyd, 1981: 88).

traces of actual building for temples XIV, XIII, XII, however the successive building levels were found.[4]

The next intelligible temple is temple XI (Fig. 7). Temple XI is the first temple in Eridu that was built over a platform. It is more sophisticated than the previous temples. The platform was made of hollow casemates which were filled with sand, rubble and ruins of earlier building, so the platform was not a solid structure made of mudbrick (Safar, Lloyd, Mustafa, 1981: 94). On the south-east wall of the platform, there was a ramp surrounded by a parapet wall, the ramp was constructed over the parallel walls. The ramp rose 1 m and its width was 1.20 m. It seems that the platform in the later period was extended however the type of construction material remained the same, but in the later period the ramp was replaced by a flight of stairs.

Temple XI is the first complicated and sophisticated building in Eridu. The walls were made of long, rectangular (52 x 27 x 7cm) mudbricks. The thickness of the wall was the thickness of the brick. The temple had a main chamber which was the center of the structure. It contained recesses and buttresses. The buttresses were located on the outer surface of the walls and could have two functions: decorative and reinforcing. The dimensions of central room were 4.50 x 12.60 m. The northeast and southwest sector of the building had disappeared, but in the south wall there are three chambers, all with access to the main chamber or sanctuary. The southwestern chamber had an access to the corridor, and from the corridor one could enter the central chamber. The southeastern chamber was the biggest among the three and contained a rectangular offering table,[5] preserved 15 cm high in the middle. The smallest room was the middle one, measuring just 1.70 m per side. There is no trace

[4] No traces of actual structure were found: "if the temples had been rebuilt at these two periods, it must have been sited some distance to the northwest." (Safar, 1981: 90).
[5] The feature showed marks of burning and is surrounded with ash, so can be identified as an offering table.

of an entrance however I assume the entrance was located in the southwestern wall (Safar, Lloyd, Mustafa, 1981: 94).

The architectural plan of temple X (Fig. 8) was almost identical to temple XI with only a few changes in layout. Similar to temple XI, the platform was built upon the ruins of the previous temple. Construction of the platform followed the same method i.e., the hollows between walls were filled with rubble and sand. Here again the platform was extended. The dimensions of mudbricks in Temple X were 47 x 25 x 6.5 cm. The corridor along the southwest wall still existed. The building was ornamented by buttresses and recesses and there is a large mudbrick podium in the middle of the southwest recess. There are still three chambers in the southeast side of the temple, but unlike temple XI the biggest chamber does not contain an offering table (Safar, Lloyd, Mustafa, 1981: 96).

Temple IX (Fig. 9) was built on the ruins of temple X. The walls of temple IX are thicker than those of the previous temples and the plan layout is more understandable. The main chamber, i.e., the sanctuary, has dimensions of 10 x 4 m. There is a cult platform made of mudbrick 40 cm high adjacent to the southwest wall of the sanctuary. Opposite the cult platform on the other side of the sanctuary is a mudbrick bench. Similar to temples X and XI on the southeast side of the building there are three rooms; one again functioned as a corridor which extends over the whole southwest length of the sanctuary. The off-center entrance of the building is located in the southeast wall with the open vestibule (i.e. ante room), so one first enters into the double door anteroom then to the main chamber. Both the corridor chamber and the large chamber have separate entrance doors from the platform.[6] The large chamber has an access to the main chamber. It seems that the main chamber has

[6] The large chamber which contained an offering table has two entrances both from the shrine and the terrace. Perhaps the terrace entrance opened to the public for rituals.

another entrance on the northwest side of the building (Safar, Lloyd, Mustafa, 1981: 100).

Temple VIII (Fig. 10) is one of the most sophisticated temples of the Eridu series. In this level we observe both the architectural evolution in layout and also the function. The temple was oriented northwest to southeast similar to the others, but the walls are much thicker than those of the other temples, supposedly 70 cm thick.[7] The scale of building changed to much larger. Some architectural feature remained the same; the central element again is the rectangular long room, with the cult platform in the center of the southwest wall of the sanctuary. There are two steps leading to the cult platform of rectangular shape measuring 20 x 30 cm and 20 cm high. Next to the platform two piers projected out from the northwest and southeast wall of the sanctuary to act as a frame for the cult platform and emphasize it. Also, it gives to the architectural design an imaginary screen that separates the space around the cult from other spaces within the sanctuary. It has been suggested that its setting creates a sort of "proscenium" opening.[8] The identical architectural elements are repeated on the other side of the sanctuary along the corresponding walls. It seems that these two pairs of piers constructed two imaginary walls that divided the sanctuary or main chamber in three sectors. To the northeast of the sanctuary, parallel to the piers of the "proscenium", there is a large mudbrick offering table, measuring 20 x 30 x 20 cm. The table was burnt.

The entrance of the building is in the center of the southeast side. One enters the building through the small vestibule or anteroom and then from anteroom through

[7] It might not seem that 70 cm is an outstanding thickness but we should consider that the earlier temples in Eridu had just the wall thickness of a single brick.
[8] Proscenium "derives from the Greek *proskenion*, meaning in front of the *skene*. The *skene* was a building with doors that served as the backdrop in Ancient Greek theatre." But there may well have been a curtain or mat between these two piers, to hide the cult image on the cult platform.

the large door to the sanctuary. A low bench (10 cm high, 50 cm wide) was built between the southeast piers and the main entrance on the south corner. There are four chambers on the southwest side of the building and another two projecting ones that flank like a wing from the south corner of the temple. The two projecting rooms look as though they were added later. The latter are accessible only from the platform. At the other unexcavated side of the building diagonally, we must have the mirror image of this plan. On the northeast face of the building, a group of recesses provides the frame for the paired entrance to the sanctuary. On the exterior of the temple behind the cult platform, the wall is elaborated with twin false doors.[9] Lloyd has suggested the false door were built for some rituals. There is a door between the southeast pier and altar, this door leads us to three chambers (Safar, Lloyd, Mustafa, 1981: 100-103).

Temple VII (Fig. 11) is similar to temple VIII in character and architectural features. The size of the temple, the thickness of the walls and their orientation are almost the same. The platform was reduced in size relative to the structure it supports. There is a door on the short wall of the building.[10] The false door on the southwest wall behind the cult platform was omitted. A staircase leading to the entrance was built from the base of the platform to the mudbrick threshold of the doorway. Thus this suggests a new orientation for the temple with a fixed entrance on the side rather than from the long axis. The doorway and interior floor of the cella were also raised as a result of this change. Three steps (i.e., treads) were leading down to the platform and the low parapet wall on the either side functioned as balustrade. On the south of the building, one chamber was adjacent to the platform and had a direct access to the altar. Similar to Temple VIII, the cult platform or altar (85 cm high) and offering table

[9] The false door might have been the mirror image of the door on the opposite side. All of the features on these temples are symmetric. See the description of temple VII.

[10] Temple VIII and VII have entrance on their short wall (northeast wall) as the entrance is located exactly in front of the offering tables, might have used by officials or people for the daily offerings.

(60 cm high) had the same location, but this time no staircase was designed for the altar. The vestibule or anteroom was reduced in size; however the other chambers remained the same. It seems that from level VIII the number of buttresses increased but despite the thickness of the walls, they remained both supportive and decorative (Safar, Lloyd, Mustafa, 1981: 104).

Temple VI (Fig. 12) was built of the same construction material, i.e., mudbrick. The platform is higher than previous temples (approximately 1.20 m) and was battered inwards. The layout of the temple is similar to temple VII and the staircase led to the entrance. It seems there was no projecting chambers for this temple however the side rooms remained untouched. The main chamber is long (14.40 x 3.70 m) and similar to temple VIII and VII, with at either side a "proscenium opening" from the small vestibule. There are deep niches on the northeast wall, the cult platform is located against southwest wall of the sanctuary and on the opposite side next to the piers there is a podium. I assume that the podium functioned as an offering table. The surface of the podium is burnt and has ashes around the base containing a large quantity of fish bones. It would seem reasonable that the fish bones were offered to Enki. Van Buren suggests that "it seems more likely the fires were kindled to consume sacrifices and that indeed, the chamber next to the podium was really a local version of Opferstatten" (Van Buren, 1948: 118).[11] She also declares that "sacrifices constantly repeated on the same spot were not peculiar to Eridu, for at Uruk in the E-anna precinct belonging to the archaic period, Uruk I walls of plano-convex bricks enclosed a room or court, the floor of which was covered with such a thick layer of remains of fish that the scales and fatty waste had imparted a deep golden-yellow tinge to the whole environment" (Van Buren, 1948:103). The temple's

[11] A place for sacrifice, used also in Uruk temples.

walls were plastered and painted with lime-wash over the mud plaster. The floors were covered by pottery.

The fish-sacrifice in temple VI in Eridu is important because it is the earliest example of this ritual, and it seems to belong to the end of the Ubaid period (Van Buren, 1948: 104).[12]

Superstructures of temples III, IV and V had almost disappeared; just the platforms of these temples remained. It seems that the base of the platform had changed little, so the temples were built at the same level. The bricks used in each platform differ from one another, however, allowing the separate levels to be recognized. All the platforms are battered inwards. Temple III's platform was built of small reddish brick Temple IV's of medium sized greenish brick; and Temple V's of large bricks of light colored clay (Safar, Lloyd, Mustafa, 1981: 68).Temples II and I were both built in the Protoliterate Period. Temple II was built adjacent to platform III. Temple II and its platform were constructed of limestone and polished by plaster. There is no trace of architectural layout.

The significance of Temple I is its gigantic terrace which seems to have been restored and used for over a thousand years. The terrace was built of limestone. The limestone blocks were larger than for temple II. The platform walls had an astonishing and highly ornamented design. The walls were battered outward, in small pinkish stone steps; the step then was polished by gypsum plaster. The steps become more wavy but refined at the top of the platform (Safar, Lloyd, Mustafa, 1981: 78-79).

[12] Van Buren declares that in "temple VI a room within the sacred edifice was reserved for the sacrifices, whereas in the building of the Uruk period the place set apart for the purpose was enclosed by three walls only and apparently had no outside wall, so that it could be used independently" (Van Buren, 1948: 104).

The superstructure of temple I is different from the other temples. It seems that the face of the outer walls and façade from the pavement level up were built of semicircular mudbrick columns, similar to the Proliterate temple in Warka.

2.1.1 Architectural Analysis

As I discussed above, the earliest occupation in Eridu, in the early Ubaid period, appears at level XVIII. The remains of this level are too insufficient to have any study about it. The earliest refined structure which appears in level XVII is a simple, irregular square building that even has no trace of an entrance door. The next temple, temple XVI is more sophisticated and consists of a small chamber on the north-west wall and an altar. Temple XV is a rectangular building with a niche on the north-west wall. I place these three temples in the primitive temple category in Eridu. This group could be considered even as secular structures but the oven built next to the buildings shows marks of having been involved in some rituals, and as Lloyd suggests, “a ritual conservatism such as one would hardly expect in a corresponding domestic installation” (Safar, Lloyd, Mustafa, 1981: 111).

The change into a more sophisticated building appears in Level XI. The temple is approachable by a ramp which is located on its southwest façade. The placement of the ramp suggests the location of the entrance on the southwest side of the building. Apparently both temple X and IX follow the same architectural layout with a same wall thickness.

All temples contain a cult platform against the short wall of the shrine (southwest wall of the temple) and have a corridor along the wall behind the altar. The existence of the cult platform and its location continue unchanged until the latest phase. The location of the cult platform is a tradition that never changed in Eridu’s temple. However, the location of the offering table changed in different periods. The

offering table in temples XI and IX is located in one of the two side rooms, but in temple X similar to the Archaic temples is located completely outside the building. It would be reasonable to assume that different rituals took place in different periods and different chambers were built for various ritual practices (Safar, Lloyd, Mustafa, 1981: 113).

The architecture of temples exceptionally evolves in Level VIII. The change in plan in this level is extremely recognizable and apart from the orientation and of course the location, does not follow any previous architectural layout. Now the temple has a direct axial plan.[13] Lloyd declares: "The only constant features which remain are the raised platform and the long, rectangular cult-chamber with its cult platform and offering-table" (Safar, Lloyd, Mustafa, 1981: 113).

The location of the entrance completely changed. Now, there are two main accesses: one through a central entrance on the southeast side and the other through a twin door opposite the altar on northeast. From this period onwards, the temples have a tripartite plan, which is the typical architectural design of the following Protoliterate period.

Moreover, the shrine is accessible through the chambers which projected out of the building from the southeastern façade. This arrangement has been compared to the Tell Uqair temple. The principal staircase existed on the north side of the shrine, however, unlike Tell Uqair, there is no trace of it. The same layout applied in plans of later periods. Temple VI consists of a staircase leading to the main entrance. It has been suggested that the staircase then continued in all of the Protoliterate temples in Eridu (Safar, Lloyd, Mustafa, 1981: 113).

[13] However, since the entrance is blocked by the offering tables, scholars do not consider it as the temple with the direct axis.

Since all the temples in Eridu were built of mudbrick basic questions arise: What was their design principle and how was it applied? How were the temples in Eridu furnished and embellished?

The main design elements in these successive temples were buttresses. Frankfort declares: "the buttresses strengthened the thin walls and they were soon used to add some variety to the exterior of the building. Mudbrick is unattractive in color and texture, but buttresses regularly spaced can produce contrasts in light and shadow which rhythmically articulated the monotonous expanse of wall" (Frankfort, 1970: 18). But were the walls in fact not embellished and stayed a dull mudbrick?

As I mention, the site in the first instance was visited by Taylor. Taylor declares the existence of wall painting in the building, i.e., the figure of a man holding a bird on his wrist, with a smaller figure near him (Safar, Lloyd, Mustafa, 1981: 35). It would be reasonable to assume that similar to the Protoliterate temple, the Eridu temple was embellished with wall painting. Moreover, the architectural ornaments collected during excavation, especially in the Protoliterate period levels, suggest that the exterior of the temple was highly decorated with a variety of decorative techniques, such as colorful cones made of clay and gypsum, mosaic squares and nails in stones of various color (reddish, greenish, brown, black and pink). The existence of these items suggests that the exterior of the temple was highly elaborated and painted in different colors. Lloyd suggests that the columns of Temple I were black made of baked clay and painted with bitumen (Safar, Lloyd, Mustafa, 1981: 240). But I admit this design was just confined to temple I, since the exterior of this temple made of semicircular columns differs from previous facades. But there is no reason to suppose that earlier versions of the temple were not also painted and decorated.

2.1.2 Eridu in Ancient Texts

The temple of Eridu was known as the *Abzu*[14] or Sea House, and dedicated to Enki/Ea (Kramer, 1989: 69).

Langdon referring to the ancient text known as the Eridu Temple Hymns, states that "Enlil addressed the assembly and ordered his son Enki to build the temple Esira, "house of the nether-sea," or the *Absu* (Langdon, 1923: 161). He also mentions that "the hymn strictly emphasizes the school of music and liturgy at Eridu, for Enki was the patron of music and poetry" (Langdon, 1923: 161). It contains the following passage:

"Which in his holy temple sweetly they make for him,

The harp, algar, drum and kettle drum,

The HAR-HAR, sabilum and Miritum, fill the temple (with music)" (Langdon, 1923: 168)[15].

The Eridu Temple Hymn is also about the construction of Esira and the origin and the objects of its rituals. The hymn explains that the temple was located on the shore of Euphrates in the early periods (Langdon, 1923:161). The hymn also indicates that the temple was highly embellished with precious materials. Some verses that confirm this claim state:

"*Lord of the nether sea, king Enki.*

His temple with gold and lapis lazuli hath one built at one time,

Its gold and lapis-lazuli shine like the day-light.

The holy and deep foundation rises from the abyss.

A holy temple hath one built and with lapis-lazuli adorned it.

[14] Another name for Abzu is engur.

[15] Selz indicates that the objects such as the holy drum, spear and harp could have been cultic objects and could be understood as representations of divine power (Selz, 1997: 167).

Its chamber roars like a bull.

The temple of Enki raises the voice of prayer.

Thy beams like the bull of heaven on the holy foundation are loftily made.

Thy door-sill and the door posts are of silver-lead.

Temple erected without rival, made fit for the profound ritualistic orders" (Langdon, 1923: 163-169).

Even if we consider the hymn a myth, the poem reveals the importance of the temple in the history of Mesopotamia. It also indicates that at least at the time when this hymn was written the temple was highly embellished and decorated with precious materials. Another important hymn is a lament that grieves over the destruction of the temple. The lament explains the destruction of the city, its temple and shrine and the abandonment by Enki and Damgalnunna (Enki's spouse) of the city but the date of the destruction is not clear (Green, 1978: 127). Apparently the lament consists of five parts. Part I explains the main cause of the destruction, which is a symbolic violent storm. The following sections describe how the temple was penetrated by storm, trembles and the sacred symbols and treasures are attacked (Green, 1978: 128).

Kirugu I

"The roaring storm covered it like a cloak, spread over it like a sheet.

It covered Eridu like a cloak, spread over it like a sheet.

…Eridu was smothered with silence as by a sandstorm, its people…

… As if Enlil[16] *had glared angrily at it, Eridu, the shrine Abzu, bowed low"* (Green, 1976: 133).

[16] The name Enlil means "Lord Wind" and the title en, which stands for "lord" in the sense of productive manager (Jacobsen, 1976: 98-99).

The significance of Eridu also depended on the fact that the temple was ritually visited by other deities who were traveling here on their boats. In architectural terms, it provides the earliest known religious building in South Mesopotamia.

2.2 The Painted Temple at Tell Uqair

The mound of Tell Uqair is situated north of the large mound of Tell Ibrahim, itself located about 80 km south of Baghdad. Tell Uqair includes two mounds, each with a maximum height of 6 m. The mounds were separated by a depression which, it is suggested, carried a canal in antiquity. Both mounds were covered by Ubaid sherds, pottery and fragments of clay-cone mosaic. On the northern skirt of mound A, a settlement of the Ubaid period was found (Lloyd, 1943: 135). Tell Uqair was excavated in the 1940s by Lloyd and Safar, the same team as at Eridu and briefly in the 1970s by Michael Müller-Karpe (Bienkowski, Millard, 2000: 199).

The Painted Temple (Figs. 13-15) or the Protoliterate temple of Tell Uqair is located on the western side of mound A. Its platform survived to a height of 5 m and temple walls in some parts reach a height of 3.80 m. The temple is well preserved, since its whole interior had been filled with crude brickwork by a later builder in order to make a yet higher platform for a later temple (Lloyd, 1943: 139).

The temple is a rectangular structure with a typical Protoliterate tripartite plan and is constructed on the high platform so that it can be seen from all four sides. The temple is oriented north to south and has an indirect axis.

The platform has two levels, one upon the other. The lower terrace has a semi-circular shape and the upper terrace is rectangular. The upper terrace was smaller than the lower one, and occupied its south quadrant. The lower terrace connected by a staircase (6 steps) to the upper terrace. Two other staircases at the opposite side of the lower terrace connect the lower terrace to the ground level (Lloyd, 1943: 144).

Frankfort states: “In fact, the arrangement of the staircases of the Painted Temple, two ascending from opposite directions while a third, halfway between the two, leads to the uppermost platforms, unmistakably represents an early form (as yet asymmetrical) of triple staircases used by the Third Dynasty of Ur at Warka and Ur” (Frankfort, 1943: 133).

The location of the lower terrace and upper terrace differs. The lower terrace occupies the northeast and northwest sides of the podium; however the upper terrace is built at the south and southeast of the podium. The flanking staircases had each 40 steps (treads are 27 cm wide and 10 cm high) and were surrounded by parapet walls 1 m high that functioned as balustrade, (Lloyd, 1943: 145) it seems that this is the case also for the upper terrace staircase. The surface of the parapet walls was embellished with two small vertical channels. All of the staircases had bitumen drains which were placed in the base of the steps. There is no trace of a landing.

The platform was placed over the soft clay pavement and was built of mudbrick. The bricks were the standard size of modern bricks, in contrast to the larger bricks used in the later extension.[17] The side walls of both terraces are decorated with buttresses, however the lower terrace has an extra design element, i.e, a band in five rows designed by mosaic cones, placed above the buttresses.

Due to the denudation of the temple just its northeast half has survived, but because of the symmetrical layout characteristic of this architecture, other parts can be feasibly reconstructed. The plan of the temple is similar to the plan of the White Temple in Warka, so it has a tripartite type of layout with an indirect axis. The temple is rectangular and consists of three distinguishing parts. It includes a long rectangular

[17] An extension appears later on the north side of the original platform.

central chamber with two distinctive groups of chambers on either side, i.e., the northeast and southwest sides (Lloyd, 1943: 139).

The temple is built upon the upper terrace and oriented south to north. The two entrance doors are located on the long wall, the north side of the temple. Most probably the same architectural features existed on the parallel missing side too.[18] The walls of the temple are constructed of mudbrick and placed over the bitumen surface of the platform without sunken foundation. The mudbricks used for the temple construction are similar to those for the platform construction, both in size and shape, so it would be logical to assume that the platform and temple are contemporary. The floor surface both inside and outside the temple is bitumen which was covered with fine clay. The upper terrace in a finishing layer was also coated with whitish gypsum and there is a trace of reddish water-paint over the northern surface (Lloyd, 1943:138).

There are three chambers at the northeastern side of the temple and I assume because the plan seems symmetrical there were also three chambers on the southwestern side, although the corner one is subdivided and contains a staircase. Across from the entrance doors on the opposite wall are two doorways of almost equal size that open to the main central chamber. There is a cult platform against the northwest wall of the central hall and an offering table in the center. The axis of the central hall passes through the center of both altar and offering table; however, the entrance is perpendicular to the main axis (Lloyd, 1943: 139), an “indirect axis”.

Two staircases were found inside the temple. An L-shaped staircase that is located inside the north chamber led to the roof of the temple. The second staircase, which has six steps, was built to the northeast of the altar and leads to the top of the

[18] The south of the building is missing.

cult platform. The cult platform was built of mudbrick, measuring 2.60 x 3.60 m and 0.8/0.9 m high. The offering table was not so well preserved, however. The end walls of the main hall are designed with buttresses with two recesses each. There is no trace of windows in the main chamber, so assumedly the light could penetrate through a clerestory window, as illustrated on Uruk-period seals.[19]

The exterior of the temple was entirely articulated with buttresses and recesses, with "small vertical flutes sunk in the plaster of the buttress faces, three to each normal buttress and four where the spacing at the corner became wider" (Lloyd, 1943: 139). The walls were coated with mud plaster 3-5 cm thick and the façade was painted white with gypsum plaster.

The significance of the Painted Temple lies in its wall paintings. As I mentioned before, the wall heights and wall painting were well preserved, since the temple had been filled with mudbrick. Similar to the exterior walls, the interior walls also were coated with mud plaster, and in each square meter we can observe the trace of paint. Apparently, the interior of the temple comprised wall paintings all over its surface. The design elements included human and animal figures, plus geometric decoration. The background of design elements was completely white and mostly blue and green tones were used for the figures. The figures were firstly drafted with a red and orange color, then colored and finally outlined in black (Lloyd, 1943: 140).

The design elements were consciously organized. The painting composition was made in three parts; first there was a red dado from the floor to 1 m high, all around the wall surface. Above this was a 30 cm band of a geometrical pattern; and finally above the geometrical ornament, human and animal figures were placed, at the upper reaches of the walls.

[19] A seal from Tell Billa illustrates the mubrick walls of the temple façade, decorated with alternating buttresses and niches; the roof of the central hall is higher than the façade and vaulted (Collon, 1993: 172) (Fig. 16).

The most remarkable and well-conserved wall painting is located at the front and sides of the cult platform. The decoration on the front side of the cult platform[20] is an architectural design and presumably symbolizes the façade of the temple (Fig. 17). According to Lloyd, the cult platform was conceived as a miniature temple (Lloyd, 1943: 140). This tradition continues until the Old Babylonian period. Similar to the façade of the temple, the miniature buttresses were designed vertically and carry also three flutes and two recesses as embellishment. The buttresses were painted in white and yellow and recesses were filled with a geometric pattern. There are two white buttresses in the middle of the composition and these probably represent the entrance doorways of the temple.

Two leopard figures were painted on the altar, one in front and the other on the side platform (Fig. 17). Both figures are in profile. On the side platform next to the steps the leopard is lying on his forelegs in couchant position and looking forward. The background is in white color and the figure has the thick black outline; the eyes, ears and top of the tail, mouth and neck are painted in solid black color (Lloyd, 1943: 141). The leopard on the side platform is in seated position, but otherwise treated in the same manner. On the northeast wall of the central chamber behind the platform are remains of other paintings. The design includes the vertical and horizontal bands of geometric pattern, i.e. functioned as the frame, and the frame contains figures of bulls (Fig. 17). The geometric embellishments are in black and white color and the animals are painted in solid dark red and contoured with light orange.

I suggest that both lion and bull represent the guardians of the cult platform, especially since the cult platform was designed to represent a temple. It is known that lions and bulls were placed as doorkeepers in the entrance of temples or decorating

[20] All the more reason to interpret it as the socle for a cult statue. I should mention that scholars use the word altar in their descriptions, however in this thesis I prefer replacing the word altar with cult platform.

different part of the doors. This representation continues even in later periods, such as Early Dynastic and Old Babylonian. Though the ways of representation could change, the concept remained the same (Braun-Holzinger, 1999: 154).[21]

On the door jambs of Room 2 are the fragments of the geometric ornament which is drawn both vertically and horizontally. There is no trace of figures. Finally on walls B, D and F[22] (Figs. 18-20) the lower parts of standing human figures can be identified. The most remarkable of these figures exist on wall D, where two human figures stand back to back over the horizontal geometric ground. Both figures wear short skirts, and their legs are outlined with light red color. The right figure has a plain skirt similar to the figure on wall E (Fig. 21), but the left person wears an elaborate skirt decorated with stripes and diamonds patterns. He would correspond with the royal or priestly figure illustrated on Protoliterate seals (Lloyd, 1943: 142).

Four Archaic texts were found in the temple. One contains a name Galga separated from other names by two lines. Safar suggests that Galga was an important figure in Uqair, probably a leader or member of city council (Safar, 1943: 155). Moreover; I suggest that because of the account of grain which found also here (Safar, 1943: 155) the temple was involved in the social economy of Uqair.

2.2.1 Summary

As at Eridu, the earliest occupation in Tell Uqair appears in the Ubaid period. The painted temple was built in the Protoliterate period (Uqair phase VII) and gives us a good example of Protoliterate temple design. The temple has the tripartite plan that became the fashion in the Protoliterate/Uruk period. The temple was built upon a high solid platform, to be visible from its immediate and more distant landscape.

[21] In Uruk also under level B with foundation deposits, amulets of lion and panther were found (Perkins, 1949: 143).
[22] The letters refer to Lloyd's labeling of the temple walls; see the plan (Fig. 15).

The wall paintings, which were exceptionally preserved, indicate that the temple was decorated with scenes relating directly to the ceremonies that took place inside it (processions, human figures bringing animals for sacrifice). The wall paintings also demonstrate that Protoliterate temples in Mesopotamia were highly elaborated and embellished. The focal point of the temple is a cult platform which was decorated with leopard figures, and bulls, and designed to be a miniature version of the temple itself. The design shows the important position of the cult statue within this architectural and symbolic setting, and the significant position of the Mesopotamian temple within the Protoliterate society.

2.3 The Sin Temple at Khafajah

Khafajah (ancient Tutub), situated on the left side of the River Diyala, 24 km away from the Tigris River and 15 km east of Baghdad, consists of four mounds (A, B, C, and D). The Sin Temple complex is located on Mound A among other architectural structures, i.e., the Temple Oval, the "Small Temple", the Nintu Temple and the "Small Shrine". All these buildings were located in a small residential area in the middle of the town on the west side of the town gates. The Sin Temple consists of ten successive versions with the earliest one being located 9 m beneath the last temple. They were dedicated to the god Sin (the moon god), as shown by the inscription carved on the body of a statue found in situ (Delougaz, 1942:6).

Each of these ten building periods included sub-phases so contained more than one occupation. As a result, some spaces slightly changed even in a single building period. The ten successive temples date as below:

Temples I-V: Protoliterate

Temples VI-VII: Early Dynastic I

Temples VIII: Early Dynastic II

Temples IX-X: Early Dynastic III

The architectural design of these temples in different periods allows us to follow the architectural development from the Protoliterate period through Early Dynastic III, which can be use as a basis for comparison with other sacred structures of a similar period in this region. Moreover, the Sin Temple itself illustrates how the Early Dynastic temples answered different requirements from the Protoliterate ones. The original building was built upon dark gray soil. Evidence points to an earlier occupation that existed before the temple was constructed. This earlier occupation dates to the Proto-literate period.

The corners of the temple are at the cardinal points of the compass which makes its orientation southeast to northwest. Here, I intend to describe temples I-V together since there is virtually no change in their overall layout, but I will emphasize the gradual changes. The complex contains a temple building on the west side and a courtyard on the east side. The plan of these temples (I-V) (Figs. 22-26) is rectangular and tripartite, the typical Protoliterate temple plan with the indirect axis. It consists of a large rectangular chamber at its center. The main chamber is flanked by small rooms on the east side and a narrow long room on the west side. Each room of the east wing had a direct access to the central hall. The west room eventually becomes a staircase, and then disappears altogether in Temple VI. In all the temples, the main feature of central room (cella) is its cult platform, which is located on the northwestern wall; although the wall behind the cult platform and the platform design changed in different periods, its location never changed.[23] A series of rooms is located in the east compartment and each room had a direct access to the central hall (Delougaz, 1942: 14-34).

[23] The short wall of the cella became more elaborated through time. Also in the middle of the room a hearth was located.

Apart from these similarities in the architectural layout of the temple, some gradual changes occurred. In Temple II a passage connects the courtyard to the immediate housing units. The passage has an elaborated door jamb with buttresses. In this period, an altar is located next to the outer passage door. I assume some rituals were practiced outside the complex at the entrance door (Delougaz, 1942: 18). In Temple III, the open space east of the temple structure was enclosed to create a real courtyard and an essential part of the temple complex (Delougaz, 1942: 20). In this period, a staircase was introduced on the north wall of the courtyard, leading to the roof of the sanctuary, so the interior staircase of the temple unit was completely omitted. A new feature, a hearth was constructed in the center of the shrine, probably for some ritual practices. In Temple IV, a platform was introduced for the foundation of building, as the temple rose as a result of terracing, a few steps were added to lead from the courtyard to the eastern rooms of the temple. On the southeast side of the courtyard, a new architectural unit was built, consisting of three rooms and a small courtyard. Delougaz suggests that this unit functioned as a residence (Delougaz, 1942: 23).

In Temple V, the central hall becomes more elaborated. The niches not only embellish the north wall (i.e., the wall behind the altar) but also decorate the east wall of the sanctuary. Another change is the placement of the offering table in front of the altar with the cult platform imbedded next to it. These two features represent ritual practices that were applied only in this specific period since they are not found in later periods. In the second occupation, the floor of the shrine was raised while the main courtyard level remained unchanged (Delougaz, 1942: 34). Similar to Temple IV, there is also a residential unit consisting of two outer rooms and an inner room.

How were the rooms illuminated? As Delougaz suggests, the shrine was illuminated by three small windows located on its southern walls. However, for the inner residential rooms, clerestory windows have been suggested.

Apparently, in the beginning of the Early Dynastic period, the architectural method was revolutionized during the construction of temple VI (Fig. 27) and continued also in temple VII. It seems two important innovations appeared during this period: a change in construction material and layout of the building. The whole complex was built upon an artificial terrace. The design concept in this period evolved, with the building plan now working in more unity and no strong distinction between the architectural units. The units are surrounded by the enclosure walls, and the rooms that previously functioned as dwellings are now placed to the south of the main courtyard. The narrow corridor to the west of the shrine has been eliminated. The design of the sanctuary also changed, including a reduction in the number of doorways, now with just one door and the addition of an anteroom on its east side. The sanctuary is also more firmly built and the cult platform is much larger than the previous ones. The center of the sanctuary was occupied by a mud hearth approximately 80 cm in diameter and more regularly circular than the hearths of earlier building periods (Delougaz, 1942: 43). Since the complex was built over an artificial terrace (1.50 m high), four steps were built at the entrance of the complex leading to the rectangular room announced as a gateroom. The evidence shows that the entrance to the complex was adorned with two square towers.

The architectural layout of Sin Temple VII (Fig. 28) resembles the plan of the previous period, with some changes. The foundation of this temple is thicker than that of the previous building, and the ruins of the previous building are covered and sealed with reeds or mats. As the entire complex is now at a higher level, the entrance

staircase from the street is longer than the previous one. The courtyard has some significant changes; against its northern wall midway along the wall there are two rectangular projections as well as a round basin used for rituals. The southern wall now includes two rooms with direct access to the courtyard. Because the temple was built across two occupation periods, small changes have been observed in the second occupation. The most significant change is found in front of the gateway with the appearance of a small terrace, projecting out of the complex as part of the artificial platform.

Sin Temple VIII (Fig. 29) has a massive foundation and marks a new era: ED II. During this period for the better stability of the building, wall foundation trenches were cut into previous levels (Delougaz, 1942: 52). In this period the floor of the sanctuary was paved with mudbricks rather than tamped soil. The outer faces of the eastern and northern enclosure walls were embellished with small recesses, and on the outer face of the western enclosure wall, for the first time, shallow buttresses appeared. The entrance staircase is more firmly designed, reducing the number of steps to three and leading to a large landing. The entrance jamb was elaborated with small recesses and flanked by two symmetrical towers. The gateroom remained unchanged, but now an L-shaped staircase is located to its south. The courtyard has a more sophisticated shape, and an outdoor altar is introduced for the first time on its southern wall. The design of the sanctuary remained mostly untouched, only becoming larger in size and with a small corridor added to its northern wall (Delougaz, 1942: 55).

With Sin temple IX (Fig. 30), the plan of the shrine is similar to the previous temple, but some architectural features were added to the courtyard. Now, in front of

the outer altar, ten offering tables are located (Delougaz, 1942: 67). It would be reasonable to assume that different ritual practices applied in this phase.

Sin Temple X (Fig. 31) is the last temple covering the largest area among these successive temples. The temple extended toward the southwest upon the ruins of a private dwelling. Besides the main entrance being shifted from the east to the north, its design features also changed. The two symmetrically attached towers are now less projecting and more part of the northern wall. The entrance opens to the gateroom, which is still located on the northeast corner of the courtyard. The temple now includes four sanctuaries in which probably a diverse set of rituals were practiced, perhaps to several different deities. In this period, to the west of the main shrine a room has been added that, similar to the shrine, contains a cult platform against its northern wall. To the south of the gateroom an irregular trapezoidal room exists. This chamber is furnished with six offering tables at the far end, no doubt for rituals. Delougaz suggests that an altar existed on the southern wall behind the offering tables similar to the arrangement in the cellas in the Tell Asmar and Tell Agrab temples (Delougaz, 1942: 71-78).

2.3.1 Summary

These temples were chosen for this study because they show the evolution from the Protoliterate to the Early Dynastic plan, and indicate how Early Dynastic temples answered different requirements from the Protoliterate ones. Study of these temples illustrates that though some architectural structures (e.g., storage rooms) and features (e.g. offering tables, altar, basin) shifted from one location to another or increased in numbers, the location of the shrine and its adjacent rooms was a tradition that never changed even in different periods. Changes were concentrated in the courtyard area, introduced with Early Dynastic temples but not present for

Protoliterate ones. The concept of the Protoliterate temples, which were supposed to be viewed from all sides on a high platform and without an enclosure wall and courtyard changed. In contrast we see a new concept, hidden nature of rituals in the Early Dynastic when the temple is entirely separated from the street and residence around it. The location and massive building of temple X's gate suggesting that the privacy of the temples increases with ED III.

Moreover, in the Early Dynastic temples become more sophisticated and contain more functional spaces. It would be reasonable to assume that the function of the temples slightly changed in this period. Pollack states that though the Sin Temples in Khafajah was wealthy in the Protoliterate period, it was not involved in production of any kind (Pollack, 1999: 124). But the Early Dynastic temples were more involved in economic activities (Postgate, 1992: 115).

2.4 The Temple Oval at Khafajah

The Temple Oval (Figs. 32-34) is located on the westside of Mound A in Khafajah. The temple is oriented northwest to southeast, and is significant not only because of its shape, but also for its architectural complexity and the hints that refer to the secularity of building in some architectural spaces. The temple dates to Early Dynastic II-III (Delougaz, 1940: 3). The oval enclosure of the temple compound is not unique. The Ninhursag temple at al- Ubaid (Delougaz, 1940: 2) and the Inanna temple at Lagash (al-Hiba)[24] show a similar architectural layout. However, I suggest that in contrast with the Temple Oval of Khafajah, the small architectural units within the complex of Ninhursag such as chambers do not firmly follow the layout of the enclosure wall. The inscription that was carved on the macehead found in the Temple

[24] See "Al-Hiba, 1968-1969, A Preliminary Report," (Hansen, 1970:243-258).

Oval's third building period might suggest that the temple was dedicated to the goddess Inanna (Delougaz, 1940: 2).

Three building periods have been articulated for the temple. The temple has two enclosure walls one within the other, with large rectangular courtyard surrounded by chambers and a shrine at the back of it and similar to all Early Dynastic temples in Mesopotamia, the whole structure of the temple is constructed with sundried plano-convex mudbricks. The remains of the shrine were never found as it was built on top of an interior platform, and entirely eroded away.

The whole area of the Temple Oval was built over a solid clay layer that functioned as the base of the temple. The base itself was built upon pure sand which apparently was brought from another part of the region (Delougaz, 1940: 11). Under the pure sand was a black soil with a large amount of reeds, suggesting that the pure sand was dumped over the land (Delougaz, 1940: 14). The excavation reports suggest that, before the temple could be constructed, the area underneath the foundation was first cleaned and purified and then filled with pure sand and finally covered with the artificial terrace. The purification had ritual purposes.

The outline of the temple includes two enclosure walls, both in oval shape, parallel with each other and one within another. The two walls are about 3 meters at their minimum distance. This interval reaches its maximum of 8 m in the north, where House D is located. The sand layer found beneath House D is similar to the other part of the complex, suggesting that House D was included in the original plan even in the first days of the construction of the temple (Delougaz, 1940: 19). The original plan was maintained through its three building periods. Both walls performed as the enclosure walls for House D, the inner courtyard, the various chambers and the main shrine. The inner face of the outer enclosure wall is embellished with buttresses.

Delougaz is not sure of the function of these buttresses, but I assume they were reinforcing the outer wall of the complex as the thickness of the superstructure of the outer wall is just 1.50 meter. They are also decorative indicating from the outside the presence of a sacred building.[25]

The entrance of the temple is off-center and located on the northwest side of the complex. As one enters the building, the floor level increases deliberately. In the gateway, four steps lead to the forecourt which is placed between the two enclosure walls; the forecourt is like a backyard for House D. The forecourt is 70 cm above the ground level of the town, at the same level with House D (Delougaz, 1940: 21).

In the corner of the courtyard on the northwest, next to house D and the enclosure wall, a rectangular oven was built. On the northwest of the inner enclosure wall, east of the courtyard, the second gateway was located. At the entrance of the gateway similar to the main gate, steps lead to an upper level. The gateway has two parts: an inner and outer part, the outer part more elaborated, and the inner part narrower, leading to a small rectangular chamber (K 45: 4) and from there to a second larger rectangular chamber (K 45: 5). The large room gives direct access to the main courtyard. I suggest both rooms had a different function, as their sizes also are different from one another. I assume the smaller room was a vestibule and the larger room was supporting the gateway room for guarding and constructed to strengthen the need for security and privacy. A stone socket was found here in situ, so a closed door separated the courtyard and room K 45: 5. Several triangular rooms were built in the corner of the courtyard, following the shapes of the oval, for storage (Delougaz, 1940: 25).

[25] Outer buttresses appeared in the second building period.

The main courtyard is rectangular and is surrounded with rooms. In the northwest part of the courtyard, there are double rows of chambers; elsewhere, rooms are built in a single row (with one exception rooms K 46: 4-5 on the southwest of the courtyard). The floors of chambers were covered with clay and had a slight difference in elevation. At the northwest side of the inner courtyard (the place of the entrance door) five more chambers are located. Two of these rooms (K 44: 4 and K 44: 10) are very narrow in size, with 2 m widths, and probably were a corridor or the place for a staircase leading up to the roof. Rooms L 44: 5 and 3 have direct access to the inner courtyard. Room L 44: 5 is connected to the large triangular room which is located next to the northwest corner of the inner enclosure wall.

Room L 44: 3 also connected to a very small irregular room (L 44: 7). The walls of room L 44: 7 were coated with bitumen and waterproof material to prevent the penetration of damp inside the structure; this suggests that the room was used as a granary for storing perishable goods such as cereals (Delougaz, 140: 27). Five chambers were located next to the northeastern side of the courtyard. All of these chambers, except chamber N 45: 3, a small triangular room, had access to the courtyard. The other chambers are almost rectangular. Chamber N 45: 3 is connected to the courtyard through its adjacent chamber (i.e. N 45: 1-2). Great numbers of maceheads were found in room M 44: 1; including one inscribed with the name of Inanna. Apparently the room was a workshop or storage for stone cutters (because of the character of the finds). In the room N 45: 1-2, ovens were found and in its adjacent room (small and triangular) a large pottery basin was found. The oven, the large brick basin and the amount of sherds found in these rooms, as well as the indirect connection of the small triangular room to the main courtyard, suggest that

the larger room, with kiln, was used as a pottery workshop and the smaller room for its storage facility (Delougaz, 1940: 29).

There are three rooms in the southeastern side of the courtyard. These rooms are located behind the platform of the shrine. Two triangular rooms are located of the sides of the small rectangular room and made a heraldic architectural design. Only room N 46:1 has a direct access to the courtyard. The numbers of storage jars and woven reeds in these rooms suggests that these rooms were again used for agricultural storage. I assume, because of the location of the rooms (close to the shrine), that their products were used for offerings to the god (Delougaz, 1940: 30). At the southwest side of the courtyard there are two groups of rooms. Of these rooms, room K 45: 6 and M 47: 1 are significant. Room K 45: 6 has an irregular shape and consists of two oval features in the south and one in the north corner; both features are next to the enclosure wall. The arrangement of the rooms, abundance of ashes and the presence of these oval features suggest that these rooms were used for ritual practices (Delougaz, 1940: 37). In room M 47: 1, three valuable copper statuettes were found. These statuettes and other small copper objects that were found in this room suggest that this part of the building was used for storing metal objects (Delougaz, 1940: 33).

The largest space within the temple oval was its inner courtyard. The courtyard was in a rectangular shape and measured 56 x 38 meters. The focal point of the temple was at the back, a platform with supposedly a shrine on top, occupying the eastern half of the courtyard. Some essential features within the courtyard are a refuse pit 7.50 m in diameter, which contained sherds, bones and organic materials, two circular wells built of plano-convex bricks, and offering tables. The most significant part of the courtyard is its nearly square platform and the architectural features around it such as the altar and the staircase. The outer wall of the platform was designed with

buttresses. Between the buttresses a stepped altar was located, which was surrounded by podiums. The podiums were most probably used for rituals (Delougaz, 1940: 41). The staircase, which is not placed symmetrically to the platform, and the number of buttresses are our only indication for the plan of the shrine. It assumed that a rectangular shrine was located on the top of the platform; the entrance of the shrine would look at the courtyard and the cult platform against the short southwest wall. In this case the temple similar to other Early Dynastic temples has an indirect axis indicated by the location of the platform staircase (Delougaz, 1940: 66).

The most isolated structure within the complex is House D. House D was located at the northwestern corner of the complex, between the two enclosure walls, which makes it separate from the temple courtyard and temple sector. The structure had residential features showing it to be a secular building. The house probably was built for the high priest who served and coordinated the temple complex. Because the foundation of House D like the Temple Oval is laid on pure and clean sand, it is certain that House D from the beginning was part of the project (Delougaz, 1940: 44).

There is no direct access to the main courtyard of House D, so one first enters the antechamber, and from the antechamber a narrow and long corridor, connecting two rooms, with access to the main courtyard. All of the rooms in House D, similar to the main layout of the structure are placed around the courtyard and have access to it. The northeastern side consists of three rooms. The most significant one is room L 43: 4 which has special features. Similar to the others, this room has a direct access to the courtyard, but a few steps in the doorways lead down to the floor of the room, which is 53 cm lower than the other rooms of the building.

Delougaz suggests the room was a private shrine for the priest because of a feature in the north corner of the room. The feature is rectangular and built of unbaked

plano-convex bricks. The base of the feature is about 1 x 1.6 m and situated 86 cm above the floor of the rooms. The feature has two handle-like parapets at its sides (like an armchair) and was coated with white lime plaster. Both the shape of the feature and the abundance of objects found inside the room, such as a female statue head, a male statue head, statue fragments, animal amulets, cylinder seals, maceheads and ceramic bowls, suggest that the feature is an altar and room L 43:4 was a shrine for the private use of the occupants of House D (Delougaz, 1940: 49).

The largest room of House D is located at the southwest of the courtyard (Room K 43: 3). The room is rectangular and has direct access from its northeastern wall to the courtyard. On the opposite wall to the main entrance door, a rectangular feature (2 x 2 m), adjacent to the northwest wall is located. The feature looks like an offering table. Two more doorways were located on the northwest wall beside the offering table and connect this room to two others, in back of the chamber. The most remarkable object found in room 3 is a stone plaque which shows some rituals. A quantity of marine mollusc shells were also found in situ together with clay sinkers and sea nets in Room L 43: 9.

As I mentioned, the building had three phases, but the changes in architectural layout were small. In the second occupation, the layout plan of the temple was almost untouched, but the floor level of the structure rose slightly. Major transformation affected only the reconstruction of the outer enclosure wall and the appearance of buttresses on the outer surface of the outer enclosure wall. In House D, a group of small rooms replaced three rooms of the northwestern side, the old entrance was blocked and a new entrance was built through the outer enclosure wall, so in the second period House D had a direct access to the town.

The third building period (Late ED III) involved more important changes. First of all, the oval enclosure was rebuilt in a thicker version, and became sub-rectangular. Similar to the second building period, the outer face of the outer enclosure wall was elaborated with buttresses. The gateway in this period is also more elaborated than in the other periods. Two symmetrical towers projected about 4 m on each side of the gateway. Each tower in its inner face was articulated with three recesses (Delougaz, 1940: 98-105). Finally, in this period, House D was totally eliminated and replaced by the enclosure wall, so the complex got smaller in its north side.

2.4.1 Summary

The Early Dynastic II-III Temple Oval covers three building periods, though the original architectural plan remains unaltered throughout. As I mentioned the temple was well protected with enclosure walls. Jacobsen declares: "with the beginning of the third millennium B.C., the ever present fear of famine was no longer the main reminder of the precariousness of the human condition. Sudden death by the sword in wars or raids by bandits joined famine as equally fearsome threats" (Jacobsen, 1976: 77). Another factor which is significant in the construction of the Temple Oval is purification of the earth beneath its foundation. Probably, private buildings and cemeteries of Protoliterate and ED I were removed and replaced with pure sand. This indicates that the temple had a particular position in Khafajah society. The complex also consisted of secular chambers, the workshops and storage facilities, which suggest that the temple had specific economic activities.

House D was the largest secular structure within the complex and must have functioned as a residence for a wealthy family or the priest and administration of this large religious compound. During the final phase (the third, ED IIIB) House D was eliminated. Henrickson declares: "this significant architectural change strongly

suggests that its former occupants, presumably including the high priest of the Oval, must have had to move to a dwelling somewhere outside the Oval complex at that time" (Henrickson, 1982: 11). This might suggest that the secularization of the temple society or reorganization of the temple's administrative structure now under the municipality of Tutub, modified the original plan.[26] Because the shrine itself was built out of unbaked brick, no trace of it remained (Delougaz, 1940: 67). It is assumed that the shrine followed the standard layout of ED religious architecture. Finally, apparently the main courtyard functioned mainly for the performance of some rituals, according to evidence such as the footprints of animals, sacrificing was the main activity that took place in the courtyard as offerings to the deity. Also, I should mention that the animals might have been brought to the temple for feeding the deity as the god has to eat and drink.

2.5 The Kititum Temple at Ishchali

Tell Ishchali is an asymmetrical mound measuring 600 m long and 300 m wide. Excavation here uncovered a variety of monumental building dating to the Old Babylonian period, such as the Kititum Temple[27], the Shamash temple, the town gate and the palace ("Serai") [28]. This thesis is concerned only with the description of the Kititum temple.

The Kititum temple (Fig. 35) is the most significant building at Ishchali and dedicated to the goddess Kititum. The importance of this temple is due to its large size and monumental architectural features. The temple consists of three building periods, but since evidence shows that the rebuilding process followed the original plan, for

[26] The similarity between architectural features of the Sin temple and the Temple Oval, such as the temple gates and rituals features located in the courtyard (ED III) might suggest the existence of administration which was involved in the temple's construction.
[27] Kititum is a form of Ishtar (Ellis, 1986: 358).
[28] Excavation began in 1934 under the direction of Henri Frankfort and Thorkild Jacobsen assisted by Harold Hill as architect (Delougaz, Hill, Jacobsen, 1990: 1).

the most part the original plan remained unchanged. The temple follows the typical plan of the old Babylonian period, with a main courtyard, flanked by rooms, and the cella at the end of the courtyard with a direct axis from the entrance door. Important features are the towers at the entrance doors and the use of two levels (the main temple court and the upper temple court) (Delougaz, Hill, Jacobsen, 1990: 7). The complex includes four important structural units, i.e. the upper temple court with its cella, the main temple court, and two small shrines on the north.

The temple was built mostly with sun-dried mudbricks. However, in some places, such as the stairs and the places which required waterproofing such as drains and courtyards baked bricks were used. By the Old Babylonian period, the main structure of temples remained mudbrick, a conservative tradition, although foundation, courtyard and bathroom were always paved with baked brick as also for houses.

The Kititum temple was built on a high platform. The platform was enclosed on all sides by a *Kisu* or retaining wall. The *Kisu* included a mudbrick core with a facing of baked bricks. Finally, the outer face of the *Kisu* was adorned with buttresses and recesses (Delougaz, Hill, Jacobsen, 1990: 38-9). The evidence gathered as a result of sounding tests demonstrates that the complex was built on top of private houses of an earlier period. Also, the foundation of the upper temple resembled the superstructure of the temple, with the walls sharing the same features, such as doorways, decoration by vertical T-shaped grooves, so it seems the *Kisu* and the temple proper shared the same surface decoration. The only difference is that the walls of the superstructure were not plastered (Delougaz, Hill, Jacobsen, 1990: 27).

The main temple court is about two meters above its immediate surrounding, and the upper temple is two meters above the lower part. The upper temple seems to

be the focal point of the complex and is the focus of the lower building (Hill, 1990: 10). I believe these two units also follow the Old Babylonian temple plan and, the whole upper court can be considered as a cella for the main temple court.

The superstructure of the Kititum complex is surrounded by thick walls embellished with buttresses in the typical style of Babylonian architecture.[29] The temple includes three main gates; two of them are located at the southern part and one at the eastern part of the complex. All gates are flanked by two towers, both of which are decorated with vertical T-shaped grooves (Delougaz, Hill, Jacobsen, 1990: 36).

The plan of the upper temple follows a rectangular shape and consists of a courtyard surrounded on three sides by a single line of rooms. The courtyard has direct access to the town via the southern gate, and another gate on the east side leads to the lower temple (Delougaz, Hill, Jacobsen, 1990: 11).

The street gate is flanked by two projecting towers, each of them embellished by five vertical T-shaped grooves located at the top of the staircase that composes the monumental entrance. The sanctuary sits at the back of the court, and is designed as a separate architectural unit in broadroom plan: antecella, cella and the cult niche in the center of its back wall, aligned with the doorways. The antecella has no special marks except its two pivot-stone boxes that specify the existence of double doors.

The shrine chamber is a rectangular room that consists of the entrance to the south and a niche on the north side. Its orientation is aligned with the main axis, which makes it an entirely different concept plan from the Early Dynastic cella. The mudbrick pedestals are 40 cm high and were built for rituals next to the cult-niche. It has been suggested that the pedestals could have been the tripod for statues of

[29] The original enclosure walls are only preserved in the northeast and southwest areas of the complex (Delougaz, Hill, Jacobsen 1990: 10).

guardian beings. Moreover, the niche was constructed for the placement of the seated statue of the deity (Delougaz, Hill, Jacobsen, 1990: 12).

On the east wall, a mudbrick bench is found. This bench was apparently used to hold votive objects. A door on the west side connects the chamber to a group of rooms. The largest room (4-Q.30) among them is the temple's treasury that contained valuable objects, such as cylinder seals, beads and stone vessels. These objects were presented to the deity as votive offerings. At the east end of the large room, a slender staircase (8-Q.30) connects the upper temple to the lower temple. As the treads are narrow and risers are high, Hill suggested that the staircase was not built for public use but for the chief priest. On the east side of the upper court, the floor is higher than on other parts, so it is well preserved. The main room (1-R.31) in this part is the room providing a connection between the main courtyard and the upper temple courtyard. The room has double doors on its east side and a single door, off center, leading to the upper court (Delougaz, Hill, Jacobsen, 1990: 19). The large rooms are supposed to be a vestibule; however, there is a second vestibule (1-R.32) on the southern side. It has been suggested that the large vestibule was often used in ceremonies or rituals.

The paved main courtyard is large in size and its surface walls are embellished by buttresses. The main courtyard was framed with rooms on three sides, the fourth side provides the monumental entrance into the upper temple court The entrance is located at the west end of the court and, similar to the gateways, is flanked by two grooved towers. In this area, the stairs that lead to the terrace of baked bricks are more elaborated than those of the main gateways (Delougaz, Hill, Jacobsen, 1990: 20-21).

Finally, the northern wing of the complex divided into two independent temple units follow the standard plan: a rectangular unit, court in front and broadroom

plan cella at the back, which makes them identical to the upper temple layout but on a smaller scale.

2.5.1 Summary

The temple of Kititum is a good example of the Old Babylonian temple plan with a court in front and the cella at the back with a direct axis, a pattern which even the small units follow. According to Hill, "the upper temple presents no features unusual in a Babylonian temple, except for its triple entrances" (Delougaz, Hill, Jacobsen, 1990: 11). The temple includes three shrines, having a main and two subsidiary ones. The subsidiary shrines on the north part of the complex, apparently are the temple of other deities that served the main deity. The room behind the cella was apparently used by scribes registering the tools for the temple workers and other rooms served as storage for these tools (Delougaz, Hill, Jacobsen, 1990: 68). However it also has been suggested that "the sections of the northern part of the temple which have been called "cellas" were used in different ways during various phases of the temple's occupation, and there is considerable question they were ever used as shrines" (Ellis, 1986: 763).

Finally, a radical change occurred in the temple plan of the Old Babylonian period. The general layout is standardized throughout south Mesopotamia. In contrast with the variety of Early Dynastic temple plans, it seems that this is a new age in the monumental architecture of Mesopotamia.

CHAPTER 3

COSMOS OR ENVIRONMENT

Mesopotamian temples are the monumental architecture that served as the dwellings of deities rather than places to hold assemblies for communal worship. These monumental structures give a remarkable evidence of the power of individuals and the skillful craftsmen, and enormous effort involved in their construction. Though these temples were used by the whole community especially for rituals and during festivals, they were also the creation of the upper class to control the production of their society. The upper class also had the political power to use the labor in these construction projects (Trigger, 1990: 122). These monumental structures (temples, palaces) turned into symbols of power because they were perceived as manifestations of huge amounts of human energy. Therefore the political power was seen as the ability to control this energy and the temples and monuments served as a symbol of the power of politicians (Trigger, 1990: 125-127).

The representation of the temples as a symbol of political power and social status however is not my concern in this chapter. What I would like to discuss here is the cosmology, the religion of the Mesopotamians and how the temple found itself in the core of this vast ideology. Finally I would like to show the impact of the natural environment on these temples and consequently their impact on their immediate environment. In this chapter, we will see how the Mesopotamian ideal order and

world (order of cosmos) led them to construct their human environment and organize their society.

Mesopotamian civilization emerged in an environment where each element in the cosmos differed. We find, in one occasion the elements of order: the regular change of the seasons, the stars, the sun, and the precipitations. In the same environment, however we also find elements of anarchy: the violence of two rivers the Tigris and Euphrates, which can destroy the human crops and products (Jacobsen, 1946: 126). In this apprehensive and fearful environment, in which a human felt he was not enough by himself, gods were produced and the elements of the universe were personified. These central powers limited human beings, and also created a sense of fulfillment. In addition, they acted to answer human needs and to respond to the fear to obtain accomplishments, fulfill economic demands, security, health and freedom. The main word used to refer to gods and religion in Akkadian is *Puluhtu,* fear[30] (Burkert, 1996: 31).

Although this fear of disorder was rooted in Mesopotamian society, the Mesopotamians did not perceive cosmos as anarchy but as order. This order, however, was not something given, but something to be achieved through the incorporation of the will of all cosmos elements. As Jacobsen explains: "His understanding of the cosmos tended therefore to express itself in terms of integration of wills, that is in terms of social orders such as the family, the community, and, most particularly, the state. To put it succinctly, he saw the cosmic order as an order of wills-as state" (Jacobsen, 1946: 127).

[30] "The fear of the gods was the very foundation of religion. Adad-shum-ustu, describing the happy beginning of Assurbanipal's reign, wrote: 'the gods are well disposed; the fear of god is great; the temples are rich,' and the king himself says 'in the presence of the sanctuaries of the high gods I am awed'" (Delaporte, 1996: 135-140).

But how were the elements of the cosmos perceived by Mesopotamians? In contrast to the Greek ideology that involves a variety of images in its cosmic order, Mesopotamian ideology is a unified world. In Greece some pictured the cosmos as an ensemble of living creatures considering the individual as a microcosm and the cosmos as the macrocosm, so the individual was the citizen of the world polis (Wright, 1995: 56). Others saw the cosmos as an artifact of a divine or a political state. Some considered the cosmic order as being ruled by a single power, and others yet assumed cosmic order as being achieved by the balance between equal energies (Lloyd, 2000: 21). Mesopotamians considered each element of the cosmos (e.g. sun, star) as a citizen of the universe-state in cooperation with one another for the better fate.

Within this ideology towards nature, elements of nature became personified. Objects in the Mesopotamian environment became alive and had a will of their own. The elements of nature had the power of decision, control and because of their characterized properties, could be used in witchcraft, incarnation or to satisfy the gods. An example of this power is the salt used in witchcraft and the grain offered to pacify the angry gods (Jacobsen, 1946: 131). The personification and ability of each phenomenon to have will existed either in the nature of the element itself (for example salt is pure and hygienic so it was used in witchcraft to break the spell) or in the potential that the element had to be used in an appropriate way in society. Reeds are a very good example of the latter concept. Reeds, which are abundance in the Mesopotamian plain, were never divine or sacred but had a special potential. They were used for making musical instruments, for writing poems and other texts and also for the construction of houses (Jacobsen, 1946: 132). This power in the reed, caused humans to also consider the existence of a divine personality for the element, the

goddess Nidaba. Jacobsen explains: “It was Nidaba who made the reeds thrive in the marshes; if she was not near, the shepherd could not soothe the heart with music from his reed pipe” (Jacobsen, 1946: 132). We can also see this consideration in other elements, i.e., flint, fire, even in the bricks. Jacobsen declares: “In such a world it obviously gives better sense than it does in our world to speak of relations between phenomena of nature as social relations, of the order in which they function as order of wills, as state” (Jacobsen, 1946: 131).

Though all elements in nature were personified and alive and had a power of their own, still there existed a hierarchy among them. The leaders of the cosmic state controlled all the phenomena and the fates of all beings (Jacobsen, 1946: 136). People believed what happened to them was caused by supernatural rather than rational causes (Jacobsen, 1994: 146).

Then, what was the position of the supernatural in Mesopotamia? How did Mesopotamians choose their cosmic leaders? And who played the most important role? As in other world religions, ancient Mesopotamians experienced confrontation with a power that was called Numinous. However, this power in Mesopotamia, unlike in other religions, such as Islam, Christianity and Judaism, is not totally transcendent but is both transcendent and immanent from time to time (Jacobsen, 1976: 3-6). In other religions God is totally distinct from the elements of nature and has a spiritual identity, he is transcendent as a whole, in Mesopotamia the power is not distinct from the elements of nature, the power exists at the heart of its being. In this view of the cosmos, the deities are similar to other elements in nature and are personified, associated with, and control various forms of natural forces.

The chief patron deity was Anu the god of the sky or heaven, the dominant figure which the sky plays in the universe, high beyond all other elements and the

place of unseen regions made them to choose him as a chief god (Horowitz, 1998: xiii).[31] Since the Mesopotamian region was flat and always attacked by a variety of storms, the second highest god was associated with this natural force. He was the god Enlil. As the earth is the closest element to humans, and the Mesopotamian economy was based on agriculture, for which these people needed the fertile land and fresh waters (rivers, wells and canals) to survive, the third and fourth gods were associated with the soil and the fresh water. They were Ninhursag the goddess of land and Enki the lord of fresh water and fertility (Jacobsen, 1946: 137, Trigger, 2003: 419).

However, the deities were considered to have a supernatural identity, they were not considered abstract figures. They usually were manifested in human form (Oppenheim, 1977: 184), although "Jacobsen suggests that before the early Dynastic period Sumerian gods were conceptualized less in human form than as natural phenomena" (Trigger, 2003: 429). The deities were not only represented in human forms but they also behaved as humans did. They fought, slept, ate, stole and even seduced other gods and goddesses.

For example, in the Enki and Ninhursag myth, Enki impregnates the goddess Ninhursag and then proceeds to seduce and impregnate his daughter and grand daughter (Sachs, 1969: 37). In another myth, Innana steals various divine objects from Eridu and takes them to her city Uruk (Trigger, 2003: 438).

Based on this ideology the Mesopotamians created their ideal environment. The central figure in their society was the city and the focal point and heart of the city became the temple god. The subject of how different deities became the main god of a city is debatable. For example, why was Enki the main god in Eridu, while Inanna was the main goddess in Ishchali? Jacobsen suggests that "the various city gods in

[31] In Early Dynastic Mesopotamia, the chief god was not Anu, but Enlil. In the Old Babylonian Period, Marduk was the chief god (Trigger, 2003: 439).

whom the early settlers trusted appear to be the powers in the basic economies characteristic of the region in which their cities were situated" (Jacobsen, 1976: 25). For example, in the south, the marsh land, where the economy was based on fishing and hunting, the god of fresh water Enki appears as the main god. Along the Euphrates where the economy was based on cow herding Ninsuna the lady of the wild cow was the main deity. Moreover, farther north around the Edin where the people were mostly shepherds, Dumuzi became the main god. In the north and east of the region, where the economy was based on farming, deities such as Ninlil, the goddess of grain, Enlil, wind god and god of the hoe and Ninurta god of the plow and thunderstorm became the main gods (Jacobsen, 1976: 25).

Through this ideology the deities became the symbol of power, the power that could make people attain a good fate, a fate which was not a deity because it was not an image of any reality, and was not involved into a direct relationship with the gods and humans and it was more sacred than any of the deities (Buccellati, 1981: 36).

Therefore, the place and dwelling of a god, the temple, became the most important institution within the Mesopotamian society. The temple of a city god became the greatest landowner that controlled the land and the economy of the state. The deities made the important decisions and gave the main orders and ran the city at least symbolically. The kings and priests had the highest ranks and owned the services since they were in direct communication with the main deities to guarantee the stability of the cosmos (Yoffee, 2005: 39). Finally, the people were the citizens of the city god and earned their livings as craftsmen, serfs or servants of deities (Jacobsen, 1946:186).

The question relevant to this thesis is; How did the architectural layout of these temples take form and how did these temples function?

Here, I will try to show that the temples followed this ideology both practically and abstractly. They were representative of an abstract concept but their structure influenced each individual's daily life and his concept of space and time (Richards, 1996: 193). That means since the god was humanized, temple architecture followed the design of a secular architecture since the temple was considered the house of god. Abstractly, this means that the temples were placed in the highest position within the society and controlled the economy of the city because the god had the highest ranking in the cosmos.

3.1 The temple as the house of god

The temple was called a house in Sumerian *É* and Akkadian *bitum.*[32] The house could be used to refer to a large sacred complex, or small building. It might also be used to describe a high ziggurat (Edzard, 1997: 159).

So this definition and illustrations of them on seals, assumed that deities were totally shaped in human form, lived in the temple dwelling with their family and were served by the priests, servants and craftsmen. In some occasions, the common man was not permitted to enter the cella to visit the image of god, and the image of the deities could only be seen during the procession which took place each year in the yard of the sanctuaries (Oppenheim, 1977: 186-187).

As the deities took human form, they needed to be fed. The food served to the image required a daily ceremony, offering and ritual in the sanctuary. As Oppenheim states: "There were large amounts of food, beer, bread and sweets and the great numbers of animals brought in every day from the pastures to be slaughtered" (Oppenheim, 1977: 187-189).

[32] *É* and in Akkadian *bitum,* were used for house and temple "until about the middle of the second millennium B.C when the name of Enlil's temple in Nippur, E-Kur was generalized giving rise to the term ekurru 'temple'" (Jacobsen, 1990:66).

There were special days in the year for performing these rituals and festivals: the 7th and 15th and the crescent moon, or the beginning of the month (Postgate, 1992:123).

The specific days and the materials that were used for performing a particular ritual probably were important for the wish to come true. For example, in the ritual for repair of Anu's temple one can easily observe the need for the right time and right material: "You shall prepare three sacs in an assumption month, on a favorable day, in the night, you shall sacrifice (the sheep), offer the thigh, the…roasted meat. You shall make libations of beer, wine and milk. You shall light a fire for gods Ea and Marduk. You shall sing the lamentation" (Sachs, 1969: 339).

It is highly likely that not only the people of the city but also the other gods participated in some rituals. For example in the temple rituals of the god Anu at Uruk for the 16th and 17th days of a month it is said that:

"The Scepter and the shoe shall 'arise', and then the gods and goddess shall descend to the Exalted Court and shall turn toward god Anu" (Sachs, 1969: 338).

Apart from some rituals that took place on specific days, daily sacrifices were also performed to the gods. These daily ceremonies that scholars consider as offerings (*sa-dug*) are the actual food offerings placed before the god. According to text from the Seleucid period, the deities were served two times per day, once in the morning and again in the night, before the temple gates were closed (Oppenheim, 1977: 188). Remarkable evidence can be found in the Nippur archive about the offering in Ninurta's temple. The offerings included bread, a rich cake, emmer flour, beer, fish cake and wine (Postgate, 1992: 120). Another example comes from the offering accounts at the Uruk temple; "Everyday in the year, for the main meal of the morning, you shall prepare in addition to the *sappu*-vessels of *maqqane*-eighteen gold *sappu*-

vessels on the tray of god Anu. Of these (eighteen vessels), you shall prepare before the god Anu seven *sappu*-vessels on the right –three for barley beer and four for mixed beer…" (Sachs, 1969: 343).

The number of people that lived in these temples is still somewhat unknown. It has been suggested that some staff members lived in the temple to serve the deities. The staff can be divided into two categories: the cultic staff with special skills and those without special skills who could be substituted by others. Certain people were employed to have a direct connection to the god (probably the priest) in order to perform the rituals and serve the offerings before them and some were just the servants of deities, there to clean the temple or to guard the doors. The staff that had special talents and needed to attend directly to the deities had the highest ranking in the temples: the high priest, the lamentation priest, the purification priest, the diviner, the scribe, the accountant, the acrobat, the snake-charmer and the singer (Postgate, 1992: 126).

The questions that arise are: What is the impact of this ideology (the temple as the house of god) on the architecture of these temples, and, if there is such an impact, in which period do we observe changes (if any)? The designation of the temple as the house of the deities but not as a congregation space for worship is the most important clue for interpreting the temple's plan. As Jacobsen indicates, "it must be seen basically as the plan of dwelling intended to respond to the needs and the functions of a dwelling" (Jacobsen, 1990: 66). The temples which were discussed in chapter one are a good example to respond to the questions above.

Architectural evidence indicates that the temple's plan in the earlier periods, late Ubaid and Protoliterate period followed the Ubaid house plans. For example, the plan of the Eridu temple from level XI to the end of Protoliterate period is similar to

the domestic architecture of the Ubaid sites such as Tell Madhur and Tell Abada. Similar to the temples in this period, the larger Ubaid buildings had a tripartite design and included a large central hall (Kubba, 1998: 3).[33] It would be reasonable to assume that since Mesopotamians considered the supernatural in human forms, with human needs, they applied in the earlier period the same architectural design that they used in their domestic architecture for gods. In later periods, in such temples as the Temple Oval at Khafajah one can see the evolution in architectural change through the plan of such a temple, which not only provided space for living quarters but also for different activities that the deity was involved in.

3.2 The temple as the administration center

Besides their sacred position within society, the temples were highly involved in economic activities. Their incomes came from agricultural activities, through the payments of tax and rent, the output produced by the temple's workshops, and royal gifts such as the offerings given by wealthy people or the king's allies (Oppenheim, 1977: 95).

As there is no textual evidence from the Ubaid and Protoliterate periods, and most of the documents from temple archives come from the Old Babylonian period one cannot easily understand whether the temples of the earlier periods were involved in economic activities. However, when looking at Mesopotamian literature such as hymns, for example, the temples in Eridu functioned as a pilgrimage center and were also music schools (Lloyd, 1960:30). Gil Stein has proposed that "Ubaid-period temples served as agricultural banks or buffers against times of hardship, thus facilitating their own perpetuation as social elements in a long-term atmosphere of

[33] The comparison between the temples and human environment will be discussed in detail in the third chapter.

stability and ritually meditated control" (Matthews, 2003: 105). As the temple's record shows, temples were involved in various economic activities, such as the cultivation of fruit and trees, herding, manufacturing of leather and woolen items, textile productions, metal and stone working and control of the irrigation and water supplies (Postgate, 1992: 115).

The excavation of the Sin temple of Khafajah/Tutub and the Ishtar Kititum temple of Ishchali revealed a remarkable amount of texts connected to the economic activities of these temples. The texts from the Sin temple indicate that the temple functioned as a bank, lending precious materials such as silver, as well as food supplies, such as barley, peas and emmer, to the citizens (Harris, 1955: 42). The highlight of these activities was the temple loan, the earliest dating back to the Isin-Larsa period. Apparently all the temple loans from the temples in the Diyala region date from this period (Harris, 1960: 127). It is still unclear which individuals could take a loan; mostly loans were taken by the poor until the next harvest time (Harris, 1960: 131). Two administrative loans indicate that the barley was distributed to various people. Harris suggests that barley was distributed to the people doing various services for the temple (Harris, 1955:41).

The Sin Temple's archive texts also reveal that the temple played a part in the real estate business. Apparently, if the purchase debt could not be paid officials could purchase people instead (Harris, 1955: 42). Purchasing people is not confined to the Old Babylonian Sin Temple in Tutub. At Larsa, in the reign of Rim-Sin, people were obliged to sell their children to be able to survive during economic crises (Harris, 1955: 43). Moreover, temple officials purchased slaves. However, slaves were also cheaply sold in Khafajah/Tutub. This practice is not just confined to Tutub. In other places such as Sippar, temples, 'temple dependencies' and individuals owned slaves.

For example, a slavegirl could be found working as a sweeper in the temple (Harris, 1975: 334). Harris states: "The Shamash temple and perhaps the other temples of Sippar may have been gifted with prisoners of war by the king as well as receiving presentation gifts of slaves from other pious worshippers" (Harris, 1975: 334).

Although slavery existed in Mesopotamian society, it was always tiny and insignificant. The Ishchali texts indicate that the temple was involved in silver loans, barley loans and also functioned as a real estate agent for selling the fields (Greengus, 1979: 36-43). The temple was also involved in textile production, precious metal and tools manufacturing (Ellis, 1986:767-768). Postgate states: "The Old Babylonian temple at Neribtum (Ishchali) was also engaged in textile production, and presumably controlled a specialized though there is nowhere within the excavated plan of the temple which could have accommodated them" (Postgate, 1992: 115). As these activities require washing, they were placed away from the center of the city, to where the water supply was abundant.

Who were the creditors in these temples? In most of the temple's loans, the deities and temple officials were mentioned as the creditors. The god Shamash especially appears as a creditor in the temple's loans. Apparently, this was the case because Shamash was not only the sun god but also associated with justice in traditional Mesopotamian ideology (Livingstone, 1986: 71) and assumed to be just right for creditor (Harris, 1960: 128).The next god was Sin who was mentioned in loans from Ur, Tutub . Along with the deities, the officials of the temples appear as creditors. For example, in Ishchali, *Sangu* the chief administrator mostly under the name of *Abizum* was mentioned. The texts that contain *Sangu* are either the letters which he wrote himself or consist of lists of jewelry, textiles and precious stones given to the goddess (Harris, 1986:764-766). In the Sin Temple of Tutub, especially

in the earlier period, with few exceptions, the creditor is an *enum* priest of the god Sin (Harris, 1955:38-39), later for a brief time, a temple's official like Itti-ilim-milki was mentioned as the creditor (Harris, 1955: 39).

In loans that are called joint loans, a human being was named along with a god as a creditor. It was assumed that these individuals were the temple's officials; however many of them were *tamkaru* or merchants, and apparently they worked on behalf of the temples (Harris, 1960: 128-129). For example, as Harris states: "In a temple loan from Neribtum (Ishchali), an unspecified number of officials whose names are not included appear as creditors along with Inanna Kititum. Probably these officials were part of the temple personnel responsible for the management of the granaries and storehouse of the temple, indicating that temples did have the resources serving as bank" (Harris, 1960: 129). Apparently various localities were part of the economy of these temples; people not only from Tutub but from different places came to take a loan from the Sin Temple (Harris, 1955: 36-40).

The archaeological and architectural evidence for these administrative functions can be observed especially in the Early Dynastic period where some structures were built for sacred use as dwellings for high priests or administrative centers or as a storehouse. Comparing the Protoliterate Tell Uqair Painted Temple with the ED temples in the Diyala region, such as the Temple Oval, gives us the suitable example of such changes (Adams, 1956: 228).

In the Old Babylonian period, especially with the reign of Hammurapi, there was a shift in power and authority from the temple to the palace (Harris, 1961: 117). Apparently in this period the temple administrative activities were losing their position and declined and palaces were becoming more dominant and prosperous (Oppenheim, 1977: 105). The control of authority transferred from the temple

officials to the king. The evidence revealed on seals inscriptions of temples indicates that titles of officials connected to temple establishments changed, from "servant of the temple" to "servant of the palace" during the reign of Hammurapi (Harris, 1975: 39-40). In the later period, in the first millennium B.C., the temple administration became even more secular and started to take orders from kings and important palace officials. In this period, however the temple had its own properties but was controlled by royal executives (Dandamayev, 1979: 589-591).

3.3 The temple and landscape

The word "landscape" is hard to define. Some believe that landscape is not nature, land, nor space (Ingold, 1993: 152). Some describe it as a set of time and space relation that contains human movement within it (Tilley, 1996: 162). Others see it as the *longue durée***,** which includes an individual's emotions: past actions, memories, stories, war, hate and love. Landscape can also be defined as the appearance of the land in respect to the relation between each element, or as the space that consists of all standstill natural items. However the landscape exists by itself, it cannot be considered just as the ground shape and land features such as tree, rock and water. The presence of humans, animals, and even other natural elements such as climate and seasonal change cannot be ignored as they have a great impact on it (Unwin, 1975: 130). If we consider the landscape as the relationship between the set of human interactions, such as settlements, temples and dwellings, with nature, the significance of human beings in shaping landscape can be observed and the interaction between them cannot be denied. So "while people create their landscapes, these landscapes recursively act back so as to create the people who belong to them" (Tilley, 1996: 162).

Another issue within this broad meaning of landscape is religious landscape, as human ideology can change, develop or even destroy landscape. Religious beliefs, the most significant ideology, have a crucial role in the development and transformation of the environment (Levine, 1986: 428). As Wilkinson suggests, the religious landscape is very difficult to describe, not only because the sacred monuments such as churches, mosques and temples can be consider as the religious landscapes, but also because pilgrimage routes and natural places such as mountains and springs, which give another dimension to religious landscapes, should be considered (Wilkinson, 2003: 64).

Here, I will try to outline not only how religion influenced the landscape but to show how the landscape affected Mesopotamian religion. Moreover I will also touch upon the concept of a sacred place in Mesopotamia, as well as where the temples were built and how they were projected upon the landscape.

Mesopotamian civilization emerged in an arid climate with low precipitation due to a tropical high-pressure belt and its geographical location (Wilkinson, 2003: 17). After 9500 B.C, the climate of Mesopotamia became warmer and the precipitation level increased. Nutzel states that "the precipitation increased slightly, permitting PISTACIA and QUERCUS to invade the area in small numbers" (Nutzel, 1976: 17). The warm age began in 5000 B.C. and continued until 3000 B.C.[34], and it seems that the highest precipitation levels, higher than today, appeared during this age too (Nutzel, 1976: 19). The water level was also higher so rivers like the Tigris and Euphrates, and the Persian Gulf used to carry more water.

[34] The temperature in this period was 2° or 3° above today and the region had a more humid climate (Nutzel, 1976: 19).

Since the climate changes from 5500 B.C. until today are not great, except the undependable flow of the two rivers, and the past topographical evidence is readily available, reconstructing the ancient Mesopotamian environment is feasible.

The main land of Mesopotamia is an empty flat desert with some spring spots (Postgate, 1992: 4). The north of Mesopotamia is a flat, arid land with low mounds, and its agriculture depends on monsoonal rainfall. Postgate states that "in contrast with the south, the rolling configuration of the land does not permit cross canals except as enormous engineering projects-such as the Assyrian and Sassanian kings and modern government have created- and agriculture is therefore dependent for its water on rain" (Postgate, 1992: 11). Southern Mesopotamia, in contrast to the north, is an alluvial plain, surrounded by the Zagros Mountains to the east and the Arabian desert to the west, and is filled by two rivers, the Tigris and Euphrates. This alluvial plain played an important role in shaping social organization, which was based on the irrigation agriculture economy (Adams, 1981: 2). The Tigris and Euphrates connect today into Shatt al-Arab, and flow through the marshland before they reach the Persian Gulf. It has been assumed that the water levels of the Persian Gulf used to be higher than in present times, and the older Mesopotamian cities, such as Ur, Lagash and Eridu, were located close to the seashore (Adams, 1981: 15). The primary ancient settlement was usually found down the center of the alluvium close to the water sources (especially the Euphrates); however catastrophic floods, a common occurrence in both rivers banks (Tigris and Euphrates) forced people to build their cities at some safe distance from the river banks (Adams, 1981: 6). Most of the settlements, if not all, adapted to agriculture as the main economic activities. As a reliable water supply was crucial to successful agriculture, a canal system was introduced even in the early period in order to simplify irrigation (Adams, 1981: 7).

The canalization of the land was not only utilized for the irrigation but also helped the transportation system (Adams, 1981: 20, Wilkinson, 2003: 44). Meanwhile, humans, the basic figures in shaping the topography and environment of this region, not only made the canals but also cleared the woodland and founded their settlements (Wilkinson, 2003: 71). Wilkinson suggests that the irrigation and canalization in lower Mesopotamia opened the opportunity for the exercise of power. This prospect was provided by the development of canal management, as the network developed needed control, arrangement and scheduling not possible without a leader to administer and organize them. So political leadership emerged, leader positioned, and put into place administrative requirements. As the economy developed, the population increased, directing the society to require a more sophisticated system for control and leading to a need for more sophisticated monuments such as temples and palaces, for its administrations. This development also created a growth in the number of palace and temple personnel and craftsmen (Wilkinson, 2003: 211). Further to the east, the marshland reached to the alluvial plain of the Diyala region, which joins the Tigris River towards its south end (Adams, 1965: 3). The plain resembled the lower Mesopotamian plain even in its agriculture and the economic process. Due to its cultural and political features, the Diyala region functioned as the main granary and agricultural product storage (Adams, 1965: 3). Finally, natural vegetation depended on climate change and consisted, in the arid and semiarid steppes of cultivated weeds, except in some places in the south that were covered with palm trees (Adams, 1965: 7).

In this arid and flat landscape, with scarce vegetation, the lack of three-dimensional natural elements influenced Mesopotamian ideology and made its people

have a different concept about sacred places in comparison with other civilizations. What is the concept of religious and sacred place in Mesopotamia?

The phenomenon of a sacred place is different from culture to culture since it results from the way humans perceive their immediate surroundings and their world, and the way they experience, understand and grasp it. For example, the ancient Greeks were fascinated by the beauty of their landscape and totally admired it. Writers, such as Homer and Sappho were influenced by the aesthetic sensibility of landscape and represented it in their poetry and prose (Sneddon, 2002: 62-63). "However, a notable feature of the ancient Greek attitude to places of striking appearances is that such places were rarely seen as only physically significant. Rather, such natural features were more usually connected with divine spirits or events from Greek mythology" (Sneddon, 2002: 62-63). Though these religious structures and features were located in rural areas, they were closely related to the polis because of the notion of political image (De Polignac, 1999: 4). It was believed that the supernatural inhabited particular features of the physical landscape, even fought and dwelt there (Sneddon, 2002: 63). This power of the myth and ideology in Greek culture made them highlight some natural elements in their environment. For example, mountains became the residence for gods or the place where they could express their aggression. Sneddon states that "not surprisingly, sanctuaries were often located on mountains in an effort to harness their otherworldly power" (Sneddon, 2002: 63). Some natural elements, such as springs and trees, became the symbolic place for the sanctuaries (e.g., the spring of the Meliastai or the tree as sacred grove at Lykosoura) (Jost, 1999: 217). The association of natural features with supernatural and religious ideology not only exists in ancient Greece but also in some other places such as Syria, Hittite Anatolia, Phrygia and Zoroastrian Iran (Wilkinson, 2003: 206-

207). In Syria holy places appear beside the springs or trees such as Baalim of the Syrian oases or the springs of Hellas (White, 1954: 115). The domination of the landscape led scholars to believe in the impact of the natural element on the religious ideology of the society. For instance, Evans suggests that the nature of the god did not determine the place of his sanctuary, but conversely the features of the sanctuary had an important share in determining the development of ideas to the function of the god (White, 1954: 114).

Does the Mesopotamian concept of a sacred place resemble the way other cultures conceptualize it?

Because the landscape of Mesopotamia involves flat, arid land lacking natural features such as mountains and gigantic trees, the perception of the society about their immediate surrounding varies too. It is in this environment that the society finds its ideology and by developing cities the concept of the sacred place appears. All the temples were located inside the city and there is no evidence of the existence of temples or sanctuaries in the countryside. There is no indication of sacred trees, rocks, rivers and other natural elements in contrast with places such as Anatolia, Greece and Syria-Palestine (Mieroop, 1999: 215). The good place preempted the symbol of the sacred. In Mesopotamia, the sacred place has no association with the natural element.[35] The sacred was interpreted as a place which is "clean" and "good". The pure soil itself was clean, and if the place was safe from the catastrophic impact of natural elements such as floods the temple was built there. Jacobsen describes this process by proposing that "the holiness with which the ancient Mesopotamian temple was imbued demanded absolute and immaculate cleanliness, terms for "pure" and "clean", *kug* and *sikil* in Sumerian, *ellu* and *ebbu* in Akkadian, are standard attributes

[35] Except some springs which also later of involved in the economy of the system (Wilkinson, 2003: 64).

of temples and parts of temples in texts" (Jacobsen, 1990: 67). So the purity and sacredness of the temples come either if the temple was built on the sacred remains of an earlier temple, such as at Eridu and the Sin temple in Khafajah, or, if the temple was to be built upon the remains of other structures such as domestic houses (e.g. the Temple Oval) the foundation would be purified by a deep foundation of virgin soil.

Thus far, we have seen the impact of the landscape on the religious ideology of the Mesopotamian civilization, i.e., finding a sacred place and the emergence of the temple within a city. But whether this ideology and structure of the temples influenced the landscape is still a subject of debate. We imagine that in later periods the structure of Ziggurats was supposed to resemble the mountain and give the vertical dominancy to the flat land of Mesopotamia. This can be also be true for the Protoliterate period in which the tripartite temples were located on the high terraces, so that they could be seen from all four sides. Such is the case in, places like Uruk and Tell Uqair. "Mesopotamian temples were referred to as mountain (Kur) and believed to be places for communication between the earth and the sky Ziggurats represented an extreme expression of this concept" (Trigger, 2003: 572).

Moreover, it has been assumed by some scholars that the Mesopotamian temples were surrounded by trees and gardens (Besnier, 2004: 59). Andrae found that many holes surrounded the Assur bit Akiti temples and assumed these holes were the location of trees which were planted there. Woolley even suggests that ziggurats were covered with sacred trees. Some texts mention the existence of a garden in the vicinity of the temples. The temple hymn of Eridu explains:

"Is built the 'Mountain of the land' which is unrivalled

Beside it the convent settled

In the green garden which bears fruit

The birds make their nests

The skate fish…" (Langdon, 1923: 169-170).

The temple garden was apparently associated with two names, *ekur* and *kiri*. The *kiri* garden appears in some Ur III administration texts, often describing the garden as located in Nippur. The *ekur* garden appears in the "Tummal list," the administration text of the Early Dynastic period for the Enlil temple at Nippur, where King Entemena had planted the garden (Besnier, 2004: 62-65). *Kiri*, which means "big garden" or "high garden," was associated with the most significant cultic precincts, and also contained the *ekur*'s garden and even the gardens of Ur and Eridu.

Whether the plantation existed in temple precincts or other places is still unclear. It would be reasonable to assume that by developing the temple courtyard in the Early Dynastic period, the temples such as the Sin temple or the Temple Oval courtyard might have been planted with trees. However, the archaeological and architectural evidence provides no proof of that (Besnier, 2004: 69).

Moreover as the archaeological documentation is scanty for proving the garden in the immediate vicinity of the temples, it might be reasonable to assume that either the garden existed outside the temple precincts, or there is a difficulty in translation. For example the *giguna*[36] shrine perhaps included no trees but was made of the trees, or some shrines were decorated with paintings which represented the landscape (e.g. *giguna* in Sippar), or they were potted, temporary trees were used in special rituals or ceremonies.

Thus far this chapter has explained which factors influenced the formation of the Mesopotamian temples. Although factors such as ideology, landscape and human environment seem distant from one another, they are in fact all related. Their

36 In the Early Dynastic period the *giguna* shrine was a temporary sanctuary made of reeds built on the temple terrace (Besnier, 2004: 76).

conjunction affected the Mesopotamian temple, and in consequence they were under impact of this monumental architecture.

CHAPTER 4

TEMPLE OR HOUSE

Pre-Ubaid evidence for formal religions especially cults in Mesopotamia is rare and uncertain in its interpretation. There are no specific religious structures at Hassuna and Samarran Sites, even the T-shaped structure of Samarran levels at Tell es-Sawwan that was thought to be a religious building turned out to be a domestic dwelling (Oates, 1978: 117). The evidence for religious practice first appeared in the Ubaid period with the successive temples of Eridu.

This chapter attempts to analyze and classify the characteristics of the religious and domestic architecture of ancient Mesopotamia from the Ubaid period to the Old Babylonian period in order to understand the relationship between religious and secular architecture and to determine at what stage this relationship changed. The comparison between the temples and domestic architecture attempts to search how Mesopotamian ideology and the concept of temple as the house of god reflected on the architecture of these sacred structures in different periods. In addition, this chapter aims to characterize the shrine (cella) which is the focal point of the cult structure.

4.1 Pre-Ubaid Architecture

There are no notable pre-Ubaid sites in the south of Mesopotamia. Most of the evidence comes from the northern sites such as Umm Dabaghiyah, Tell es-Sawwan, Yarim Tepe, Choga Mami and Tell Arpachiyah.

The earliest type of architectural design in Mesopotamia was rectangular. The structure of Umm Dabagiyah (Fig. 36) is one of the clearest one to show this trend. Umm Dabagiyah was a pre-Hassuna site. The site located at the Jazirah plain, included eleven levels which pointed to the existence of a homogenous culture.[37] The architecture of Umm Dabaghiyah included series of square rooms set precisely and regularly next to each other in a straight line.[38] The rooms were built out of *pisé* and functioned either for storage or dwellings. The buttresses used in the interior of almost all houses indicate that the Mesopotamians adopted these architectural elements from the beginning. The interior walls of the rooms were heavily covered with white plaster and sometimes were painted with some figurative scenes. The standard scene included human figures and onagers (Matthews, 2000: 58). Apparently the onager was the important animal in the economy of this culture. Bokonyi suggests that the inhabitants consumed the meat of the onager,[39] however Kirkbride declares that "the site was a specialized settlement, occasionally inhabited by a small group of people possibly sent from a more 'Nuclear Society' to supply the latter with animal products such as onager hides, sinews and tail hairs" (Kubba, 1987: 85). She also suggests that the sites might have been a trading center based on onager hides (Kirkbride, 1975: 8).

Another remarkable pre-Ubaid site which reveals a new style in architectural design of Mesopotamia is Tell Arpachiyah (Fig. 37). However, the Halaf culture is a northern culture of Mesopotamia, with no connection with the Ubaid period, but the structures of this period also emphasize that before Ubaid there was no formal religious cult and the concept of the shrine as the house of god. The architecture of the early phases (levels XII-XI) in Arpachiyah consisted of rectangular rooms. Circular

[37] The settlement plan follows the previous one; the houses were built and altered four times (Kirkbride, 1973: 208).
[38] The typical plan is two or three rooms running in a straight line (Kirkbride, 1975: 5).
[39] Onager bones appeared in high quantity (Bokonyi, 1973: 9).

architecture (Tholoi) appeared in phase 2, Levels VIII-VI, however the rectangular structures also continued to be built.

The tholoi were surrounded with an enclosure wall. Their walls were massive and usually painted in red color. The later tholoi were larger in size and had a stone foundation (Matthews, 2000: 86). Mallowan stated that these tholoi, because of their size, the thickness of walls, and locations (they were located at the center of the mound) were shrines (Sheen, 1982: 27). As confirmation of this assumption, Mallowan also suggested the figurines in Arpachiyah are cult objects and associated them with the tholoi. Perkins in response suggests that these figurines can not be attributed to the immediate surrounding of these tholoi so could not be part of the cult deposit (Sheen, 1982: 30). Oates noted that its formal character was indicated by its enclosure wall (Oates, 1978: 118). However, Sheen states that the massive walls were in irregular shape and could have been a bank or badly denuded wall (Sheen, 1982: 30). It seems that there is no accurate evidence to assume that these tholoi were shrines and I believe their structure is more important that their function, because it shows a new fashion in architectural design of the Mesopotamian culture.

Circular architecture in Mesopotamia was not confined to Tell Arpachiyah. Other sites such as Tepe Gawra and Yarim Tepe included tholos type of structure. The first circular structure in Tepe Gawra appeared at level XX and continued through level XIV. Because of the numerous graves which were found at the site Perkins believed that these structures were shrines. However, because of the lack of the scientific method such as the stratigraphy during the excavation by Tobler, this assumption seems inaccurate (Sheen, 1982: 32).[40] Even if we assume that these tholoi were shrines, because these structures were built in a different location, the continuity

[40] Out of thirty-one graves just eight wee associated with tholoi (Sheen, 1982: 31).

of location which was a regular feature of religious structure in Mesopotamia was not part of the Gawran practice. Yarim Tepe II (Fig. 38) also included circular structure. The site included single room houses with a tholos plan with a diameter of 3-4 m (Merpert, Munchaev, 1993: 130).[41] Merpert and Munchaev suggest that in the earliest period of the Halaf settlement, a round single-room house was the basic form of dwelling; however we observed that the earliest phases at Tell Arpachiyah represent the rectangular structure. According to Hijara the round structure of Levels VIII-VII in Arpachiyah transferred again to rectangular structure but at Yarim Tepe continued through all levels (Merpert, Munchaev, 1993: 144).

It would be reasonable to assume that the rectangular architecture was a tradition that was never abandoned and always applied through the whole pre-Ubaid period throughout in southern Mesopotamia. However the circular architecture was a temporary trend that appeared in the mid-Halaf period and continued through Ubaid in some places (e.g. Circular house of level XI at Tepe Gawra) but later disappeared.

4.2 Ubaid and Protoliterate Architecture

The monumental religious architecture of the Ubaid period evolved along with the pottery and ornament objects. However, Kubba states "the men of this culture appear to have been more proficient and creative as architects than as craftsmen producing pottery, seals, figurines, and other ornamented objects" (Kubba, 1998: 1). During the long span of the Ubaid period, sites increased in size and monumental architecture became the dominant structure of the cities; at least sites such as Eridu at the south and Tepe Gawra at the north display a good illustration of this hierarchy.

[41] It must be added that the rectangular rooms were also discovered at Yarim Tepe II (Merpert, Munchaev, 1993: 131).

Although these sites consisted of a non -homogenous population,[42] they followed the similar type of cult structure. It seems that along with agriculture, these temples had a significant role in the development of the cities, the cult place was the center for urban expansion but places without a temple remained non-urban and undeveloped (Kubba, 1998: 1, Adams, 1956: 228). There is no assurance about the origin of the Ubaid architecture, but the architectural similarity between the Samarran architecture of Tell es-Sawwan and some Ubaid sites such as Tepe Gawra and Tell Oueili suggest that the former might have been the precursor of the Ubaid sites. For example the building (Level II) at Tell es-Sawwan shows some similarities with the Tepe Gawra building of Level XIV, and three parallel rectangular rooms at Tell Oueili (Phase II) are similar to the rooms at Tell es-Sawwan (Kubba, 1998: 2) (Fig. 39). Moreover, the construction materials which were used at Tell-es Sawwan are similar to the Ubaid building. Sun-dried mudbricks were used at Tell es-Sawwan which is very different from the other Hassuna and Samarra sites that were still using pressed mud (*pisé*) (Kubba, 1998: 2-3).

The major plan in the religious architecture of the Ubaid period was the T-shaped plan. The basic feature of this type of structure was the central hall to which rooms were attached on either side of its long axis. The T-shaped structure might have been the predecessor of the tripartite plan. The tripartite plan developed during the Ubaid period and found its standard form at the Uruk-Protoliterate period at places such as Uruk, Jebel Aruda and Tell Uqair. With the Protoliterate period, the building became rectangular and was divided into three parts along its long axis. What the Protoliterate plan retains from the Ubaid one is the rectangular central hall, extending the entire length of the building. There are reasons for scholars to assume that the

[42] Oates has suggested that "we are not dealing, in the Ubaid period with a homogenous population, we must think rather of a culture which became homogenous by the combination and assimilation of diverse earlier elements" (Oates, 1960: 48).

tripartite plan originated in the Ubaid period; there is no tripartite type of structure in the previous periods, such as the Samarran site of Tell es-Sawwan and Halaf sites, which were characterized by tholoi (Sheen, 1982: 35).

Eridu's temples are the best sequence for the accuracy of this assumption. Here we observe a significant development of the temple plan, from the one-room building of level XVI to the sophisticated plan of level VI (Roaf, 1984: 80). The temples in level XIII (Fig. 40) at Tepe Gawra also share some similarities with Eridu temples. For example, the north temple (Fig. 41) at Tepe Gawra has a tripartite plan, not very developed but with a central room and two rooms at either side, and its main cella consisted of two niches in the center of both its long sides. One could enter indirectly through the corner room, which is very similar to temple IX in Eridu. This type of access was made to protect the most sacred area for the cult[43] (Kubba, 1998: 24, Kubba, 1987: 123).

In the Protoliterate period, the plan is firmly rectangular, more symmetrical and there is no extension of corner rooms. The Uruk White Temple (Fig. 43), Jebel Aruda Red Temple (Fig. 44) and Tell Uqair Painted Temple represent this type of plan. Another characteristic of this architecture is that the temple was located on the high platform to be seen from all four sides (Lloyd, Muller, 1986: 14-16, Vallet, 1998: 70).

All Ubaid temples shared the identical architectural features that later became the standard features of the Mesopotamian temples. They were built upon a platform (terraces). The continuity of location was the characteristic of these temples (for example Temple VII in Eridu was built over the ruins of Temple VIII).[44] They had

[43] A Building in Kheit Qasim also has the same central hall with the adjacent irregular rooms (Forest, 1996:62) (Fig. 42).
[44] Roaf suggests that the lack of architectural continuity is striking in Tepe Gawra, and the origin design of the temples in level XIII should be searched elsewhere than in earlier levels (Roaf, 1984: 83).

their corners or sides to the cardinal points of the compass. Their cult platform was always located against the short back wall of the cella. They had an indirect axis. From the corner room, a staircase was leading up to the roof. They were decorated both inside and outside with buttresses, the main decoration elements of the Mesopotamian temples; in later periods recesses and niches also became the fashions. The temple's walls were covered with plaster and on occasion the walls were painted with geometric elements and human and animal figures.

The tripartite plan was not confined to religious architecture. This type of plan also applied to domestic architecture of Mesopotamia in places such as Tepe Gawra (for example the White Room), Tell Abada and Tell Madhur. There is no indication of private houses with a tripartite plan in Eridu, since the excavated domestic houses at Eridu were simple structures made of reed covered with clay and plaster on both sides (Kubba, 1987: 116).

The tripartite plan is recorded in Tepe Gawra in levels XVIII, XV, XIV and XII.[45] Among these structures the plan of the White Room (Fig. 45) in level XII is clearer than the others; the name refers to its main hall walls covered with white plaster. Although the architectural features of this structure were similar to the temple, scholars such as Tobler and Roaf, recommended a secular function for this building (Kubba, 1998: 27).[46] The building has interesting features such as the presence of two niches on the northeast wall, and its entrance door was located on the short wall unlike the other Ubaid houses which were entered indirectly from the corner rooms (Roaf, 1984: 83, Rothman, 2002: 75-79).

This is the period, when the Ubaid culture spreads from the south of Mesopotamia to the north across all of Syria and South East Turkey.

[45] The side rooms are more irregular than the side rooms of the temples (Roaf, 1984: 82).

[46] Mallowan suggests that the building was a temple because of the presence of two niches, its orientation, the graves found below the structure (Kubba, 1998: 27).

In level II at Tell Abada (Fig. 46) in the Hamrin most of the buildings also had a T-shaped plan with three cruciform rooms and a T-shaped central room. The largest house (Fig. 47) was located at the center of the site. The house consisted of small rooms attached to three T-shaped courtyards. Its exterior walls were decorated with buttresses. Jasim states that "no certain features suggest that this building was a temple, but the location of the building in the middle of the settlement and the fact that it is the largest suggest the possibility that it may have been a ritual or other special structure" (Jasim, 1984: 173). Roaf suggests that the building was the residence of the chief family. Another large building located to the east of the central building, has small rooms at the end of its central room that might have used for storage (Jasim, 1984: 173) (Fig. 48).

Similar arrangements of rooms were found in level II at Tell Madhur. In this level just one complete building existed (Fig. 49). It is a single building; there are no other buildings at the site: a large farmhouse separate from any community. The building was almost square, with the central T-shaped hall. The entrance door was off center, through room 9. The massive charred beams found (on the floor of room 7 and 11) indicate that the central hall was roofed (Roaf, 1984: 117).

Similarity between the Ubaid houses and temples is very obvious, however in the Uruk-Protoliterate period this similarity is more striking. The two cities of Jebel Aruda (Fig. 50) and Habuba Kabira (Fig. 51) display good examples of the domestic architecture of the Uruk period. Here the tripartite houses are identical to the temples of this period; a rectangular building (tripartite plan) with a regular exterior and a central hall, such as Tell Uqair, Uruk and Jebel Aruda. In the domestic house, as in the temples, the central hall was the focal point of the structure. At Habuba Kabira, on occasion the hall was designed with niches. "Nearly always, the doors and the

corresponding niches directly opposite them across the hall are symmetrically arranged" (Kohlmeyer, 1996: 93). Habuba Kabira also represents a significant type of tripartite building: a tripartite flanked hall building (Fig. 52), where the hall might have been a courtyard.[47] This type of plan may indicate the emergence of courtyard houses (Kohlmeyer, 1993: 101, Wilhelm, 1998: 109).

Apparently most buildings of the Ubaid period especially the temples have had their corners or sides to the cardinal points of the compass. This type of orientation was applied to respond to the arid climate of the region to get the space as cool as possible (Badawy, 1958: 125). Youkana states that "the fact that buildings were built in such a way that their corners were made to face the central axis indicates an excellent knowledge of climatic matters. When the corners of the building face the north-south axis, the four sides of the building receive maximum sunlight, the northeastern and south eastern wall receive the sunlight until midday and the northwestern and the southwestern walls receive the sunlight after midday. Thus, all four sides of the building receive sunlight daily" (Youkana, 1997: 63).

As I mentioned, during the Ubaid and Protoliterate period, the structure of temple and domestic architecture are identical.[48] In this period, the reflection of Mesopotamian ideology on the religious architecture and belief of the temple as the house of the deity is very visible. This ideology made the Mesopotamians to build their temples identical to the houses. In addition, because the god was represented in human figure, even the function of each space within the temple was similar to the dwellings. This similarity not only appeared in the general plan of the structures but even in the architectural features of the buildings. For example the multiple doors of

[47] Other types of houses also existed in Habuba Kabira i.e, unipartite,bipartite and one hall building (Kohlmeyer, 1993: 93-96).
[48] Scholars considered some domestic architecture as the temples such as the central house in Abada and the White Room in Tepe Gawra.

the domestic buildings at Habuba Kabira are identical with the temples of Uruk and Uqair, or other features such as niches in the building. This ideology was not only reflected physically but also functionally. As the god was in human form, he must have used the space similar to humans. In the domestic houses, the hall was the center of life within the house, meals were eaten there, in the temple also the central hall was the focal point of the temple, the offerings were served there and gods ate there.[49] Moreover, the surrounding rooms in both structures served as the storage and the largest room probably was used for sleeping.

4.3 Early Dynastic Architecture

In the Early Dynastic Period, the tripartite type of plan declined and the courtyard plan emerged. The Sin Temple in Khafajah is a good example of the gradual development from the tripartite plan to the courtyard plan. The inclusion of the courtyard was a gradual development; although it has been suggested that this change was a result of external influence (Sheen, 1981: 42). The courtyard plan is also found in many places such as Tell Asmar, Tell Agrab and Nippur. The Square Temple (Abu Temple) (Figs. 53-56) at Tell Asmar is another good example of this development. Here, the earliest temple had an irregular cella, with two adjacent rooms. In the following period, the cella became rectangular and its altar transferred from the west to the east side. Not till the last phase did the temple become like the courtyard house. Now, three cellas were arranged around the courtyard for which, Lloyd suggested that "there was a definite hierarchy of cellas" (Sheen, 1981: 120).[50] Although the courtyard became the standard space of the structure of Early Dynastic temples, there was no general shape for the temple plan. In this period each temple

[49] See the Uruk vase, top register.
[50] Another interesting feature of this temple is its *kisu*, Moortgat states that "the separation of the temple from its profane surrounding is emphasized further by means of a kisu" (Moortgat, 1967: 24).

had a unique dedication, for example the shape of temples in Khafajah, i.e, the Sin Temple, the Nintu Temple, the Small Temple and the Temple Oval differed in plan from one another.

Buttresses remained the main decorative features of this period, however high terraces were less frequent. The temples of this period were generally located on a low platform. Contrary to the Ubaid temples, several rooms were added to the temple complex as dwellings or storehouses. The altars (cult platform) were found in cellas, in the courtyard (for example in the Temple Oval) and next to the entrance door (Sin Temple II). Hearths were found in the cella as well for heating purposes. The offering table and cult platform in the courtyard of the Sin Temple and the Temple Oval indicate that some rituals took place in the outdoor space for a public audience. A remarkable temple of this period was the Temple Oval, with two enclosure walls. The shrine was located in the back of the courtyard, and the courtyard was surrounded by workshop and storage rooms. The form of the temple was not unique, but shared similarities with the Ninhursag temple at Al-Ubaid (Fig. 57) including identical size. They both have a rectangular platform within the oval enclosure wall (Delougaz, 1940: 140-141). Another similar temple is the Ibgal of Inanna at al-Hiba (Lagash) (Fig. 58), where the main shrine of the temple was enclosed within an oval enclosure wall. Although the enclosure wall in this temple is very similar to the temple at Khafajah, there are also some differences; there is no second enclosure wall, and the shrine was not located on the high platform but integrated into the buildings of the southern parts of oval. This organization gives us a new aspect of architecture of the Early Dynastic Temple Ovals (Hansen, 1970: 246). Hansen declares that this Lagash temple with other evidence (Temple Oval and Ninhursag Temple) indicates that "the oval or round building was a more prevalent type in Early Dynastic Mesopotamia"

(Hansen, 1992: 207). At Khafajah and Al-Ubaid, the platform raised the shrine above the level of the temple's other rooms, and can be considered a continuity of the Ubaid and Uruk tradition. There is however evidence that their oval enclosures derive from ED domestic architecture as demonstrated by the Early Dynastic I housing complexes at Abu Salabikh (Fig. 59) and Tell Madhur (Fig. 60) (Roaf, 1984: 117, Postgate, 1992: 92).

The domestic architecture in Khafajah differed from the temple architecture although they do have the courtyard in common. The earliest occupation at Khafajah appeared in level 12 in an excavated domestic area located between the Sin Temple and the Temple Oval. Houses of level 12-7 (ED I) (Figs. 61-66), display continuity in architectural plan with only minor changes (Henrickson, 1981: 46).

Their rooms have almost the same dimensions and shapes. The rooms were located randomly and irregularly next to each other. Major changes in the architectural plan appeared in level 6 (ED II) (Fig. 67). Delougaz declares "the building activity during this occupation was not confined to the house, for it included the rebuilding and enlarging the Sin Temple (Sin VIII) at one end and the founding of Temple Oval at the other" (Delougaz, 1967: 9).

In this level three houses were excavated. The walls of the houses were thicker and formed larger rooms. The largest house, XXXII was located next to the Sin Temple. It was entered from the street through a vestibule (room 9) into the house's courtyard. Delougaz suggests that "this is the first occurrence in this area of a house with a court surrounded by rooms, a type which becomes very common, indeed predominant, in later periods" (Delougaz, 1967: 10). The houses in level 5 (Fig. 68) were built directly upon the Houses 6 walls. Because changes in the architectural plan of houses in level 5 and 6 were minor Henrickson suggests that one single family

occupied it through both levels (Henrickson, 1981: 46, Delougaz, 1967: 11). Architectural plans of Houses 3 and 4 (Figs, 69-70) are similar. In level 4 the area between the Small shrine and the Temple Oval was redesigned. (Delougaz, 1967:12). The structure of Houses 1-2 differed from the previous levels. Henrickson declares that: "this is clearly a new period of occupation in the area. The subsequent houses 1 architectural complex (the Walled Quarter) (Fig. 71) is interpreted by the excavators as a new period of building activity in this area marked by the thick outer wall and planned streets inside" (Henrickson, 1981:49).[51] Most houses of the Wall Quarter continued to consist of the courtyard with several rooms around it (Henrickson, 1982:14).

There are different theories about the function of the Walled Quarter. Delougaz suggested that the units functioned as a foreign garrison. Mallowan suggested the units were sacred because they were protected by enclosure walls and located between the two important temples of that time (Henrickson, 1982: 17). There is some strong evidence to support the latter assumption, firstly the finds such as fragments of statues and mace heads were found in situ, objects usually found in the temples of the Early Dynastic period. Secondly, the Walled Quarter's large residences are comparable with House D in terms of functional space: they were constructed within the enclosure walls, and were divided into a large wealthy area and a small service area. The elimination of House D from the Temple Oval, and southwestern rooms of the Sin Temple in this period which was simultaneous with building the Walled Quarter might suggest that the city's elite religious community financed and constructed it. Henrickson states that "the priests of at least the Temple Oval and perhaps also the Sin and other temples resided with their families in the largest

[51] This is parallel to Sin Temple X, in this period also the entrance of the Sin temple changed form the northeast to the north.

houses, while junior functionaries and important temple servants probably occupied the small houses in the Quarter" (Henrickson, 1982: 19). Though this area of the city belonged to the elite families, still the hierarchy existed among them. The size, location and the luxury which were found in multi-suit units (A-H) indicate that large wealthy families lived there (Henrickson, 1981: 14). The domestic courtyard plan house was not confined to Khafajah in this period, for example the Arch House (Fig. 72) in Tell Asmar also represents the same type of architectural plan, where the main room was surrounded by several units (Hill, 1967: 164)[52]

After this brief review of the temples and domestic houses of the Early Dynastic period, the question related to this chapter is how the concept of the temple as the house of god was reflected in this period.

Unlike in the Ubaid and Protoliterate periods, the Early Dynastic houses and temples are not identical. But they do share some similarities, physically and conceptually. Physically means that the structure of some temples and houses are very similar in layout plan: for example the Abu Temple and the elite houses in Khafajah (House D, Wall Quarter house B), and at Tell Asmar (Arch house). The concept of using the space, and the activities that took place in these spaces were similar. In contrast with Protoliterate temples which were built on a high platform, the temples of this period are no longer free-standing buildings to be seen from all four sides. Similar to the houses, the temples were surrounded by walls and closed off from the outside world. The temple became the courtyard house and its architecture looked for privacy. Moortgat declares "the building became the dwelling place for the god and like the human dwelling-place, was primary an enclosed space within which covered rooms were built" (Moortgat, 1969: 23). This similarity appeared even for the location of the

[52] Stratum Vc in Tell Asmar represents the Late Early Dynastic period.

rooms within the structure. Similar to the houses, the most important room of the building the cella, was located as far as possible from the entrance door.

4. 4 Old Babylonian Architecture

In the Old Babylonian period, temples retained the courtyard, but the formal temple layout changed in size and became uniform throughout the southern Mesopotamia. Similar to the Ubaid-Protoliterate period, there is a unity in the architectural plan of this period. The typical Babylonian temple consisted of a rectangular courtyard entrance at one end and a cella (cella or antecella) at the other (Jacobsen, 1990: 61). The courtyard was enclosed on three sides with rooms. Contrary to temples of ED and earlier periods, the temple had a direct axis, so the cult image could be seen even from the entrance door. Similar to the Early Dynastic III temples the entrance door was elaborated.[53] The courtyard surrounded by rows of rooms, the entrance door with towers and the vestibule room were almost similar. There are also some dissimilarities. For example, the shrines in the Early Dynastic period were usually a single room,[54] however, in the Old Babylonian Period, it consisted of two rooms (cella and ante cella) (Jacobsen, 1990: 58).

All the temples were constructed upon a built substructure. Frankfort suggests that "the purpose of these substructure platforms was to mark out the sacred site from the profane soil around it. We would recognize degrees: a lower platform to lift a temple complex out of its profane surroundings and a second, upper, platform to set the structures devoted to the higher tasks of ritual and administration apart from those serving mere practical and menial purposes: stores, craftsmens's shops, kitchen, which were grouped around the main court on the lower level" (Jacobsen, 1990: 63-

[53] The entrance of the the Kititum temple at Ishchali resembled the Sin Temple X and the Temple Oval (phase III), (see chapter 1).
[54] There are however, exceptions, such as in the Sin Temple at Khafajah. The cella in Sin Temple X consisted of three rooms.

64). As I mentioned, in the Old Babylonian period, the temple plan was standardized: a rectangular unit and the cella at back on a direct axis with the entire complex. The Sin Temple (Fig. 73) at Ishchali had a similar architectural plan with the Kititum temple[55].

The domestic architecture of this period, shares superficial similarities only: courtyard and vestibule. The arrangement of the rooms was completely different, however. The cities of Ur and Nippur display good examples of the domestic architecture of the Old Babylonian period. Areas AH (Fig. 75) and EM (Fig. 76) were two residential neighborhoods excavated in Ur: EM next to the ziggurat and religious quarter and AH to its southeast. The structures in both areas were similar (Woolley, 1976: 12).

The houses were made of fired and sundried bricks. The irregular streets between them indicate that no urban design was used to control the town planning. The houses were built on the same line, none of them were alike but the typical house plan was a central courtyard plan (Woolley, 1976:23). The climate of the region and search for more privacy might have dictated this type of plan. It has been suggested that "the typical Mesopotamian courtyard house was designed for seclusion and to provide maximum protection from the sun's radiation. Houses are built close together, casting their shadows over narrow twisting streets" (Guinan, 1996: 61). In this they show little change from houses and street layout in Early Dynastic times.

The plan of the domestic dwelling at Ur also was very similar to the modern Middle East houses; not only in the general plan but also in some architectural features. The courtyard with a brick pavement was the focal point of the house; the rooms usually were located around the courtyard. Two features that confirm the

[55] Another similar temple is the Temple of Enki at Ur (Woolley, 1976:64) (Fig. 74).

inhabitants were looking for more privacy are: the vestibule, like a shield between the street and the central courtyard, and, the blank façade of the ground floor (Guinan, 1996: 61). The second floor was approachable through the staircase which was usually located in the small room next to the entrance door. The farthest room from the front of the house (one of the courtyard rooms) was the reception room, the *liwan* similar to the Arab *liwan* (Woolley, 1976: 24). The other rooms functioned as kitchen, storage, lavatory and bedrooms. The domestic chapel was located furthest at the back of the house and in most case was entered through the guest chamber. The chapel was paved in brick and often half roofed. Under the roof was built a low altar against the wall (Woolley, 1976: 29). Behind the altar a recess or niche was located for burning incense. Another important furnishing of the room was a table or pedestal, for the religious services (Woolley, 1976: 29). The chapel might have functioned as the cult of a domestic god to protect the spirit of the private house against demons (Toorn, 1996: 72). On the other hand, because burials were found under the floor of the chapel rooms, the room might also have served as the place for offerings to the dead (Toorn, 1996: 77). The size of dwellings in Ur showed much variation, form four to ten rooms (Figs. 77-78) (Woolley, 1976: 95-117). This indicates that, by the secularization in the Old Babylonian period the social status of the people varied, the land belonging to the private sector increased and the private sector tended to form the extended family (Diakonoff, 1996: 56-57). In Nippur, like Ur, domestic architecture was represented by houses with the courtyard plan. Similar to Ur, the houses vary in size with rooms on two to all four sides of the courtyard (Stone, 1981: 24). Stone suggests that the small linear house with two wings of rooms (house E, G and H) (Fig. 79) were designed for a nuclear family, while the square house with a courtyard framed on all four sides was designed for an extended family (Stone, 1981: 26).

Although, the temple structure in this period was institutionalized, there are still some similarities between the structure of the temple and houses, such as courtyard, and vestibule. The most important room at the back of courtyard (Cella in temples and chapel in houses) is visible, which shows the strength of this ideology in Mesopotamian society.

4.5 Summary

The similarity between the architecture of domestic units and temples in the Ubaid and Uruk period is striking. It seems that in the beginning of the Ubaid period, conceptually the temple adopted the plan of the domestic house. The similarity also exists among the religious structures themselves. The tripartite plan took its standard form in the Protoliterate as a reflection of the "Uruk phenomenon"[56] spread throughout Mesopotamia, even to distant places such as Jebel Aruda. As I mentioned before, we observe this similarity because Mesopotamian religious ideology, the belief of the temple as house of god, is reflected in the architecture of this period. In the Early Dynastic period the architectural conformity among temples and between secular and religious structure declined. The dissimilarity among temples of this period might have been due to the political situation of the period. In this period, each city state competed for maximum power, and to claim hegemony. In the Early Dynastic period, the concept of rituals and religion also changed. Rituals were performed within the enclosure wall, isolated form the outside world, contrary to the Ubaid and Uruk periods, when rituals were performed on the high, open terraces. The tripartite type of plan declined, and the courtyard became the standard part of the

[56] See Algaze (1989, 1993).

structure.[57] Although the house of god now was maintained from the other houses in the city, I suppose the same ideology continued. In the Old Babylonian Period, the temple architecture became unified (the front courtyard, cella and ante cella at the back of the court). It seems that after the 3rd Dynasty of Ur an enormous effort of bureaucratic control was introduced by politicians, and the concept of using the domestic house plan especially in the case of gigantic temples faded away.

4.6 God in his house

The cella was the focal point of the temples in Mesopotamia. Although some changes appeared in the design elements of the cella over different periods, such as the shift in axis, the general location and shape mostly remained the same.

The cella was a rectangular structure with a cult platform usually located on its short wall for the placement of the cult statue. The cult statue mostly had a human form (Oppenheim, 1977: 184) One scene of the Stela of the Flying Angels (Fig. 80) from Ur illustrates what these images might have looked like (Roaf, 1990: 75).
Since the superstructure of the temples are largely destroyed (except for the Painted Temple at Tell Uqair), the impressions on seals provide an idea of how the interior of the cella and the images of god might have looked. Barrelet suggests that the impression on seals might have been the replica of the relief or the cult statue which existed in the temples (Barrelet, 1970: 221).

On seals the deities were mostly displayed sitting and sometimes standing on the platform. They were covered by garments and flanked by the figure of the attendant deities or worshipers. Similar to the Tell Uqair cult platform, several seals

[57] The courtyard plan not only emerged because of privacy and climate but also to achieve more lighting. Every room gets light from the courtyard, as opposed to the tripartite plan, which needed clerestory windows and multiple doors to illuminate the central hall.

and a statue from Susa (Fig. 81) display that the cult platform was carrying or flanked by lions or bulls (Figs. 82-83) (Barrelet, 1970: 221, Collon, 1993: 172-174).[58]

This evidence completely supports the Barrelet's theory and also indicates that decoration similar to Tell Uqair cult platform was applied in other temples in Mesopotamia. The interior of these temples might have been elaborated with the daily scenes and protective figures which gave a lively interior setting to the temple attendant, in contrast with the outside environment.

The image (cult statue) was the central figure for rituals, sacrificial activities and ceremonies. The images were located usually above the human activities on a pedestal or cult platform. The image was bounded and isolated from outside world by the cella's wall, but only in later periods (2nd millennium onwards) visible from the courtyard and the entrance of the temple complex. The architects made a good axial arrangement especially in the Old Babylonian period for this achievement.

The cult statue mostly had a human form (Oppenheim, 1977: 184). Few cult statues are in fact preserved, since they were usually made of perishable material, wood or bitumen, and were covered with gold.[59] Their eyes were made of precious stone to give the impression of the light of life. The god is alive and present. Oppenheim suggests that the garment of the statue was changed according to the specific ritual and ceremony taking place (Oppenheim, 1977: 184).

As the temples were the most sacred place on the earth, the cult images were made by craftsmen within the temples. The incantation "when the god was made" explains:

"statue born in a pure place

statue born in heaven" (Dick, 1999: 97).

[58] In Inanna and Enki text is written "Once Inanna enters the Absu, have her eat cake, you give her beer to drink in front of the lion" (Kramer, 1989:58)
[59] Mesu-wood is called the "flesh of gods" in the Erra Epic (Dick, 2005: 50).

The born statue still has no divinity. Divine spirit was given to the statue through the "Mouth Washing" ritual. After this ritual the image was blessed with life and its eyes and mouth were opened. Dick declares that "the finished statue can not fully function as the deity's manifestation until its mouth has been opened. The statue without its mouth open cannot smell incense, cannot eat food, nor drink water" (Dick, 1999: 97-99). The god living here was analogous to human beings residing in their houses, and on occasion they would emerge together from their houses during festivals, trips or in disastrous circumstances abandon their houses altogether.

The gods could abandon their house and images after the statue was neglected or destroyed[60]. Dick declares that "the destruction of body (cult statue) leaves the deity a disembodied zaqiqu "ghost"" (Dick, 2005: 57). The approval for establishment of the cult statue depended on the god himself. For example, in Sippar when the cult statue of Shamash was destroyed by the Sutians, it was, replaced by a symbolic equivalent, a sun disc. That indicates that humans could not make a god by their own decision. Only after the deity revealed a replica, could the king order the priest to follow the procedures and ritual to make a new one (Dick, 2005: 58).

[60] In Mesopotamia, gods could pay visit to other gods outside their domain journeying mainly by boat along the numerous canal and river arms (Leick, 1991: 101).

CHAPTER 5

CONCLUSION

Thus far, architectural and conceptual analyses of Mesopotamian temples demonstrated the factors which were involved in the formation of these sacred structures.

As it has been shown, the ideology of Mesopotamia regarding the cosmic geography of the region, and in consequence the personification of their supernatural led Mesopotamians to consider the temple as the house of deities. The reflection of this ideology on architecture begins in the Ubaid period, and reached its zenith in the Protoliterate period where the domestic architecture of the period and religious architecture were almost identical. However it seems that this reflection declined in the Early Dynastic Period, although the evidence for associating the temple with a house still exists in both physical and conceptual ways. With the secularization of religious activity in the Old Babylonian period, the temple lost its dominance, and with the institutionalization of the temple's plan in this period, the similarity between temples and domestic houses faded away.

At the same time temples in these different periods were designed in a way to answer the needs of society. The Ubaid and Protoliterate temples were built on a high platform, both rituals and temples were visible from all four sides, but in the Early

Dynastic Period the temple shut itself off inside its enclosure, had a courtyard wall and similar to the domestic architecture of this period looked for privacy.[61]

It should be also noted that the concept of 'mutually influential' factors was a phenomenon that affected Mesopotamian culture. The landscape influenced its religious ideology and in consequence dominated, by religious reflection, the temples. Or, the gods were created and considered as supernaturals who control the cosmos and society, but were at the same time controlled and enclosed in their dwellings, the temples.

It also has been shown that the temple had other functions besides being the house of the deity. It was an administration center involved in the social economy of the population. The reflection of this conceptual change is clear in the Early Dynastic temples, where the temple complex included several rooms and units that functioned as storage spaces and workshops.

The other factors that this thesis touched on briefly but should be looked into further are the politics of religion and the social status and the economy of the society. Religion was also a political force to control the society through the temples and temple officials, and of course kings were closely linked to gods. Also one must consider how social status and the economy of each society influenced Mesopotamian architecture. There must be a hierarchy and similarity from one structure to the next. This parallelism can be observed from the small house to the larger one, from the large house to the house of the chief, from the house of the chief to the temple, and from the small scale temple to the most monumental temples.

These two factors should be explored closely in future studies of Mesopotamian domestic and sacred architecture.

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[61] This similarity can be drawn between the enclosures walls of houses at Tell Madhur and Abu Salabikh , and the Oval temple compounds at al-Hiba and Khafajah.

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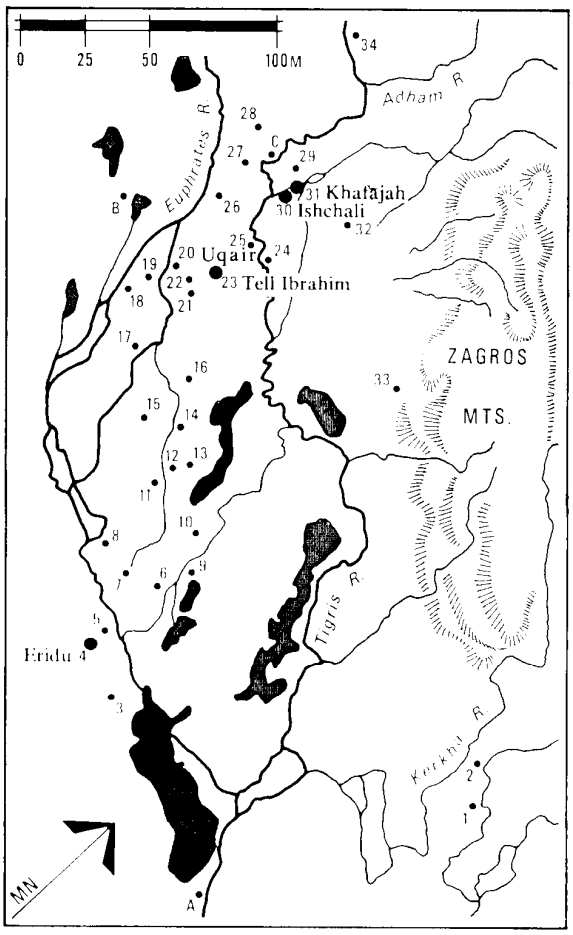
APPENDIX



BABYLONIA AND ELAM

A	Basra	11	Šuruppak (Fara)	24	Ctesiphon
B	Karbalā'	12	Kisurra (Abu Hatab)	25	Seleucia
C	Baghdad	13	Adab (Tell Bismaya)	26	Sippar (Abu Habba)
1	Choga-Zanbil	14	Drehem (Puzriš-Dagan)	27	Tell ed-Dēr
2	Susa (Shush)	15	Isin (Bahriyat)	28	Dur-Kurigalzu ('Aqarquf)
3	Kisiga (Tell Lahm)	16	Nippur (Tell Niffer)	29	Tell Harmal
4	Eridu (Abu Shahrain)	17	Marad (Wannah-was-sadum)	30	Ishchali
5	Ur (Mugaiyar)	18	Dilbat (Dulaim)	31	Khafājah
6	Kutalla (Tell Sifir)	19	Borsippa (Birs Nimrud)	32	Eshnunna (Tell Asmar)
7	Larsa (Senkereh)	20	Babylon	33	Der (Badrah)
8	Uruk (Warka)	21	Hursagkalama	34	Samarra
9	Lagaš-Girsu (Telloh)	22	Kish (Tell Akhimer)		
10	Umma (Djokha)	23	Cutha (Tell Ibrahim)		

Fig. 1: Location of five selected temples

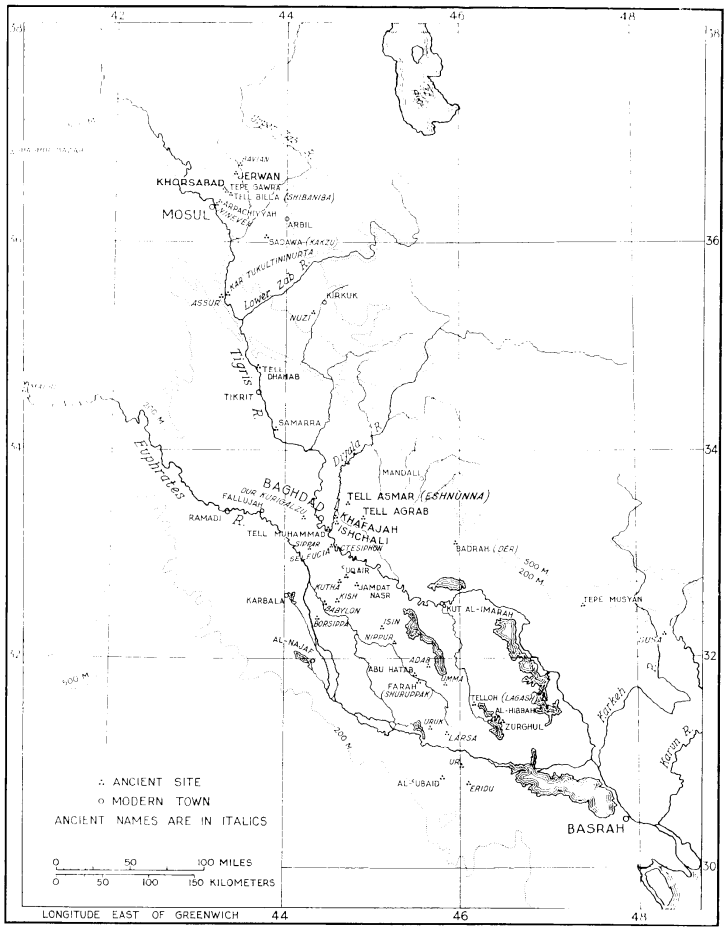


Fig. 2: Location of major sites in Mesopotamia

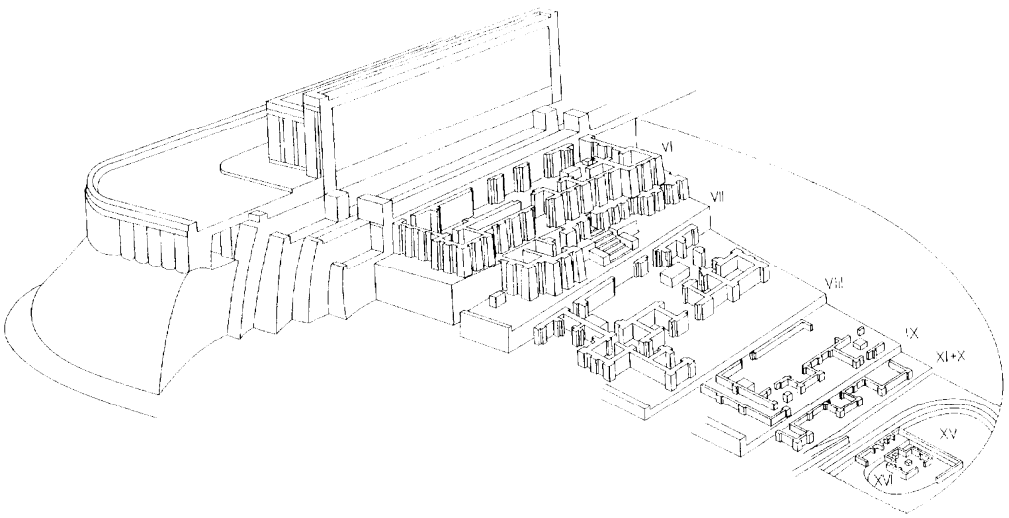


Fig. 3: Temples of Eridu

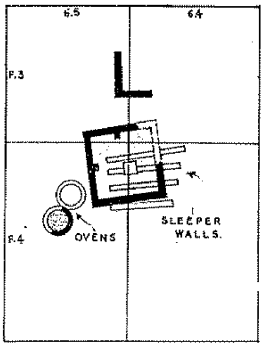


Fig. 4: Eridu Temple XVII

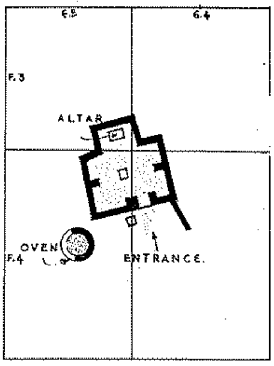


Fig. 5: Eridu Temple XVI

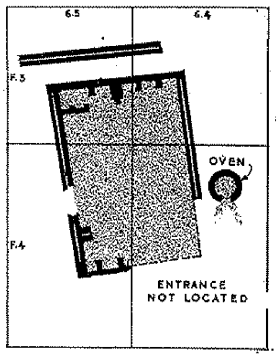


Fig. 6: Eridu Temple XV

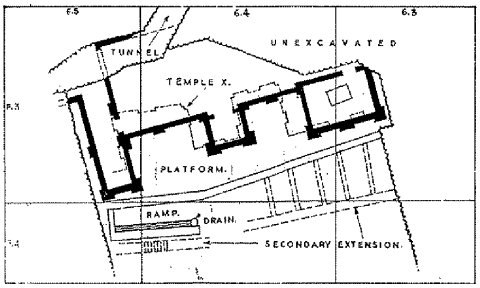


Fig. 7: Eridu Temple XI

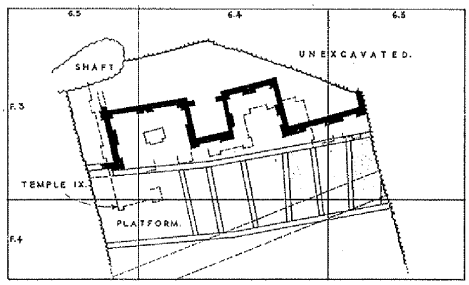


Fig. 8: Eridu Temple X

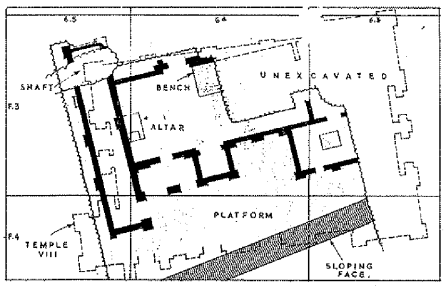


Fig. 9: Eridu Temple IX

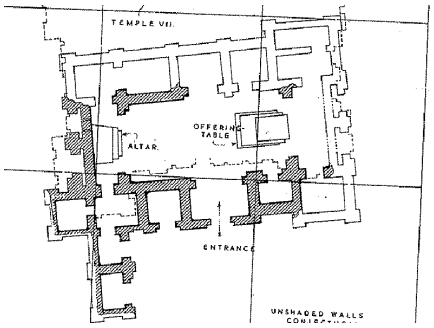


Fig. 10: Eridu Temple VIII

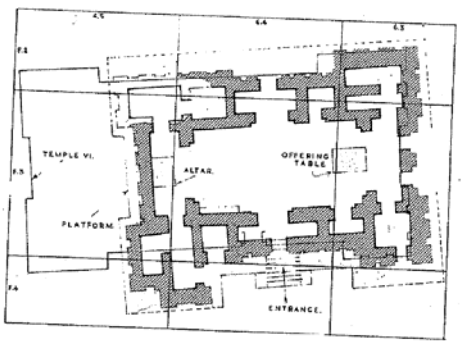


Fig. 11: Eridu Temple VII

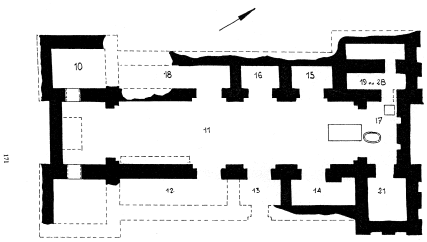


Fig.12: Eridu Temple VI

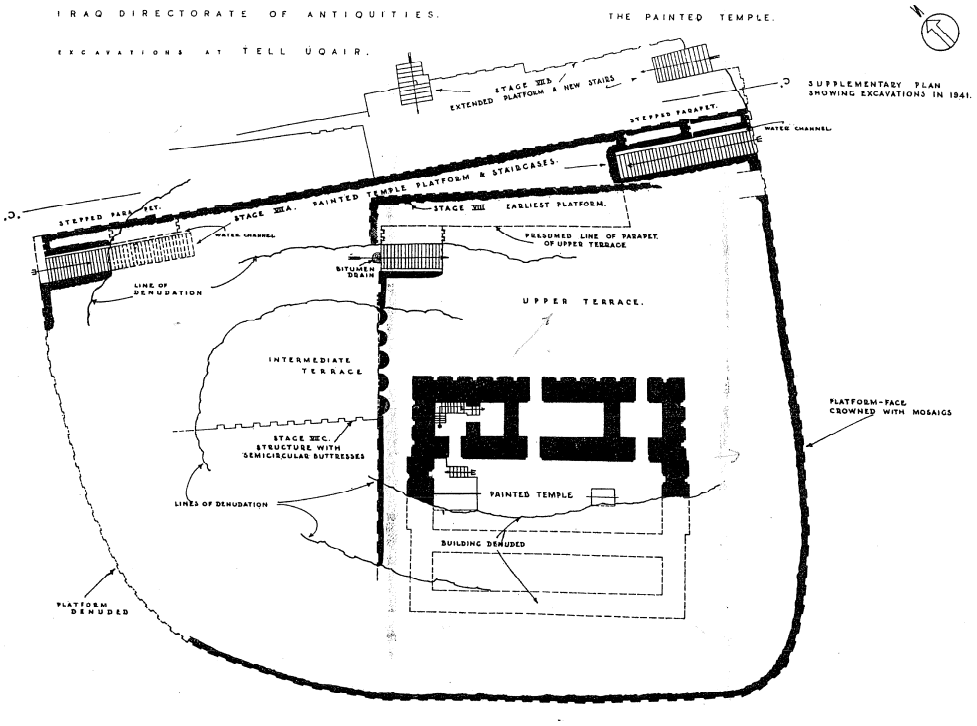


Fig. 13: Tell Uqair, the Painted Temple

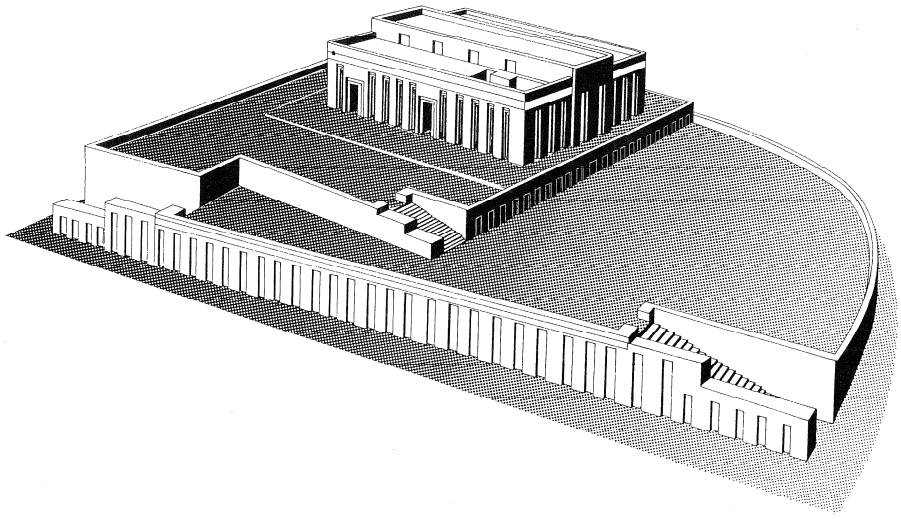


Fig. 14: The Painted Temple

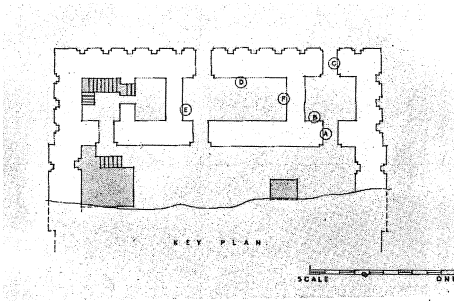
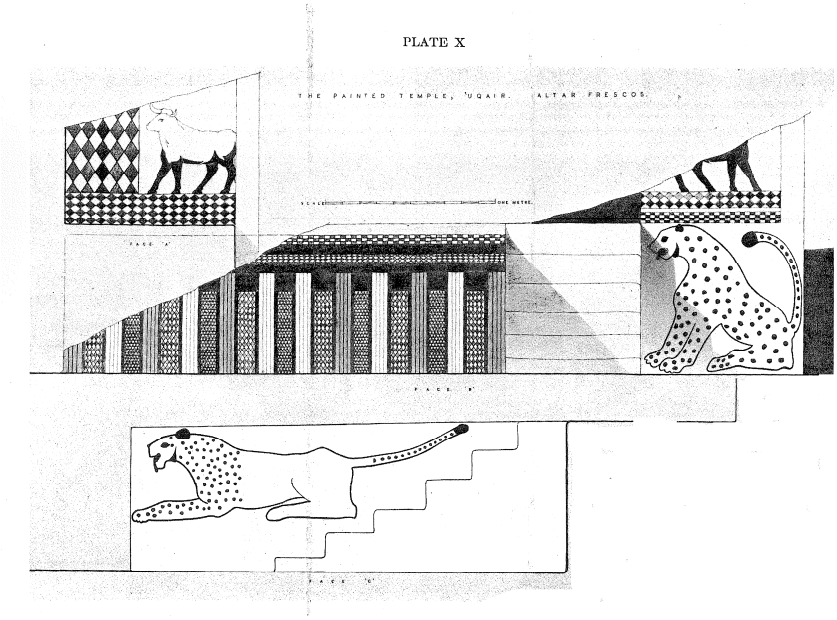


Fig. 15: Location of surviving paintings of The Painted Temple

Fig. 16: Seal from Tell Billa



Fig, 17: Altar paintings in the Painted Temple

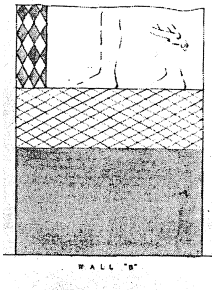


Fig. 18: Wall 'B'

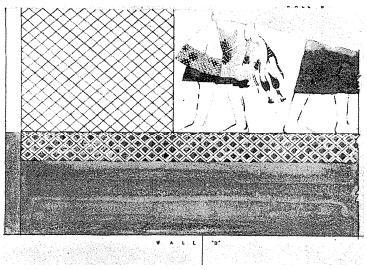


Fig. 19: Wall 'D'

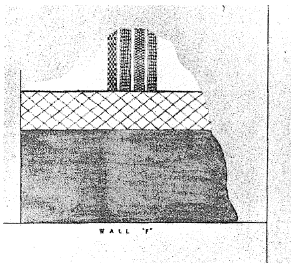


Fig. 20: Wall 'F'

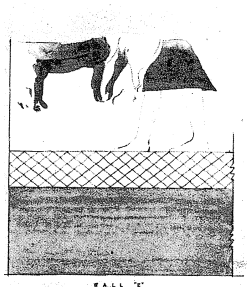


Fig. 21: Wall 'E'

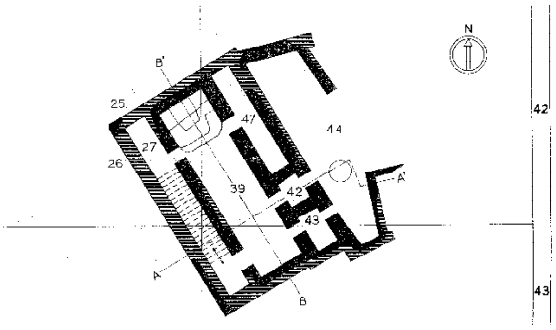


Fig. 22: Sin Temple I

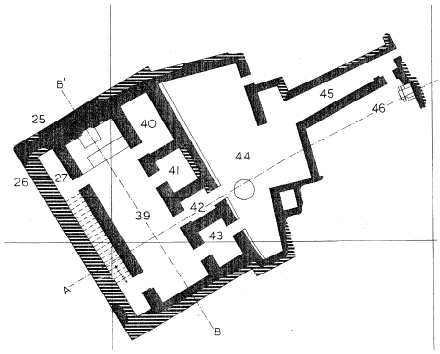


Fig. 23: Sin Temple II

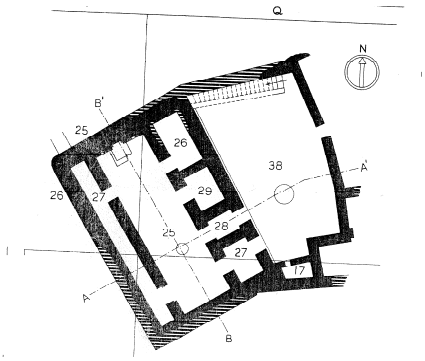


Fig. 24: Sin Temple III

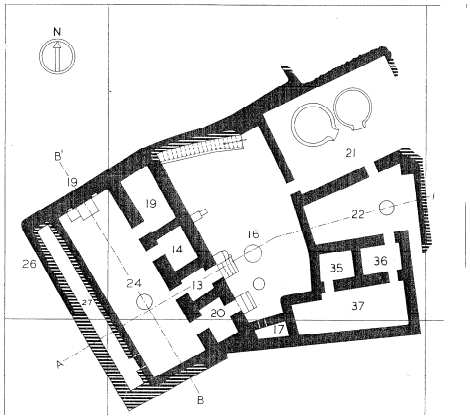


Fig. 25: Sin Temple IV

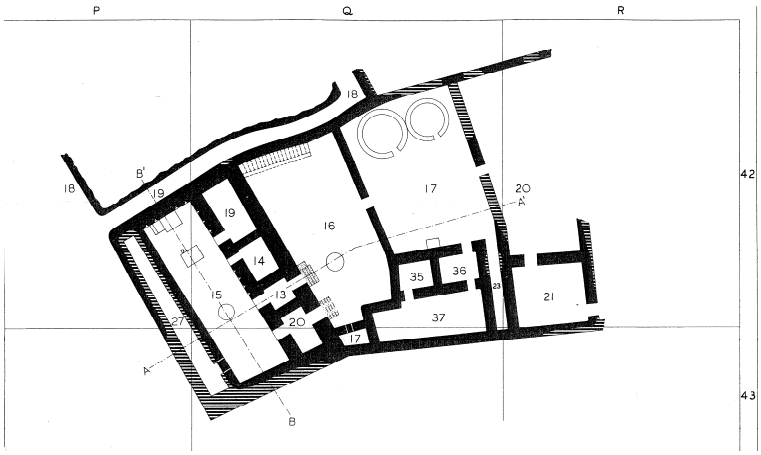


Fig. 26: Sin Temple V

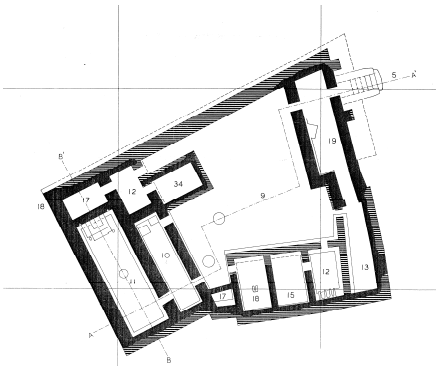


Fig. 27: Sin Temple VI

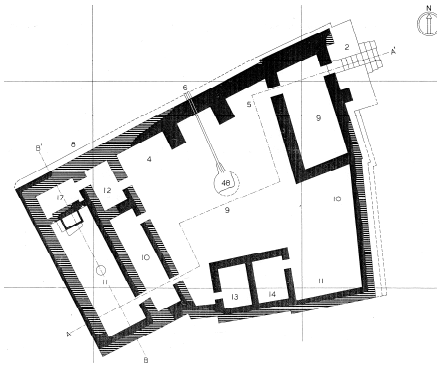
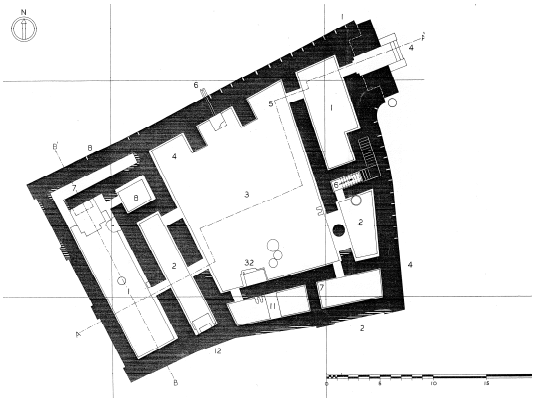


Fig. 28: Sin Temple VII



Fig, 29: Sin TempleVIII

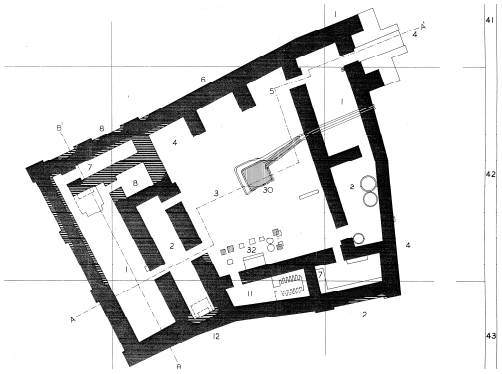


Fig. 30: Sin Temple IX

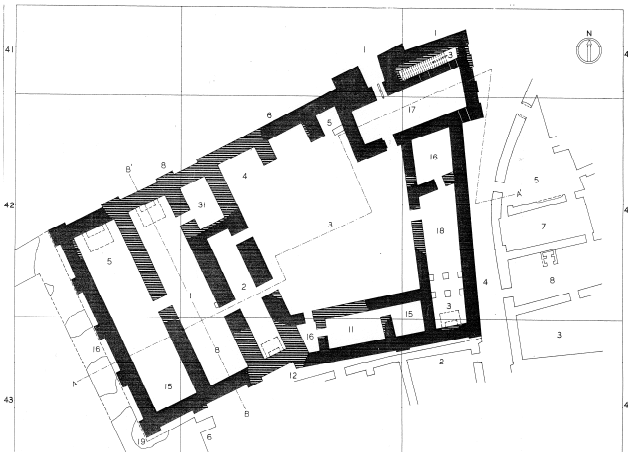


Fig. 31: Sin Temple X

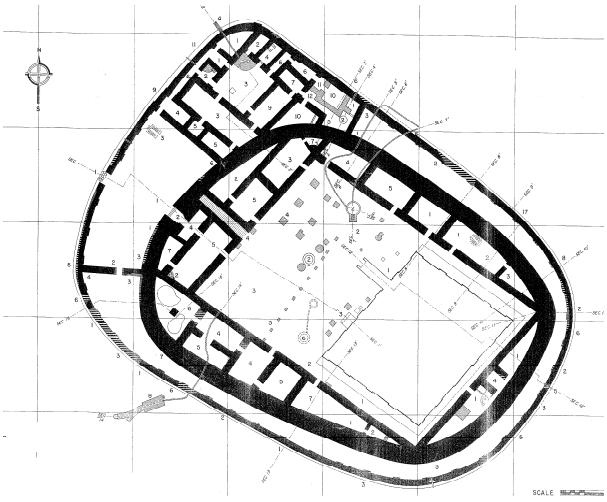


Fig.32: The Temple Oval, first building period

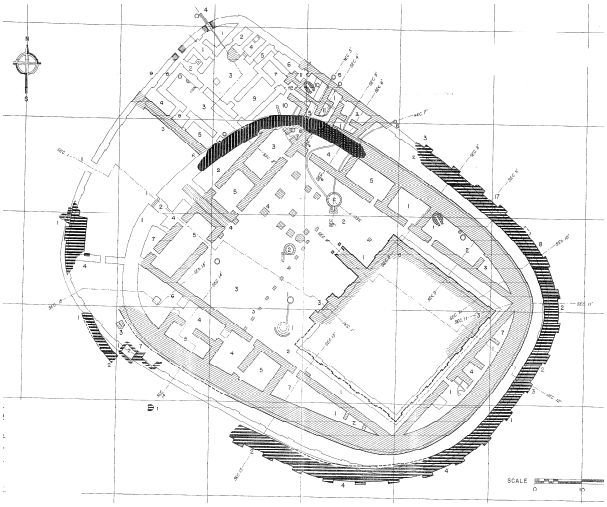


Fig. 33: Second building period

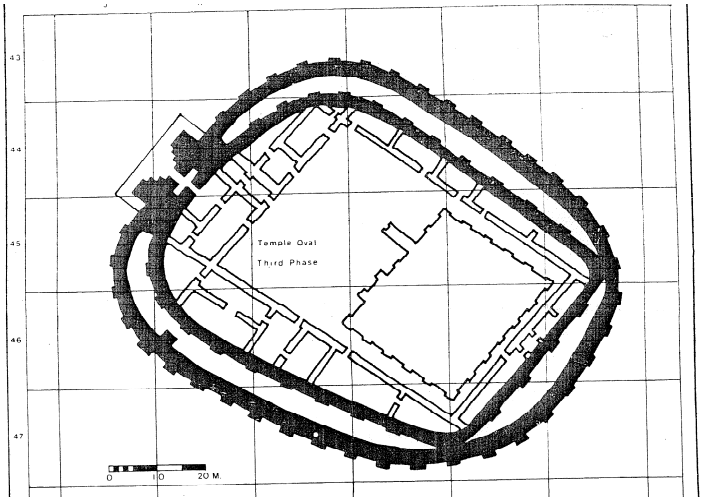


Fig.34: Third building period

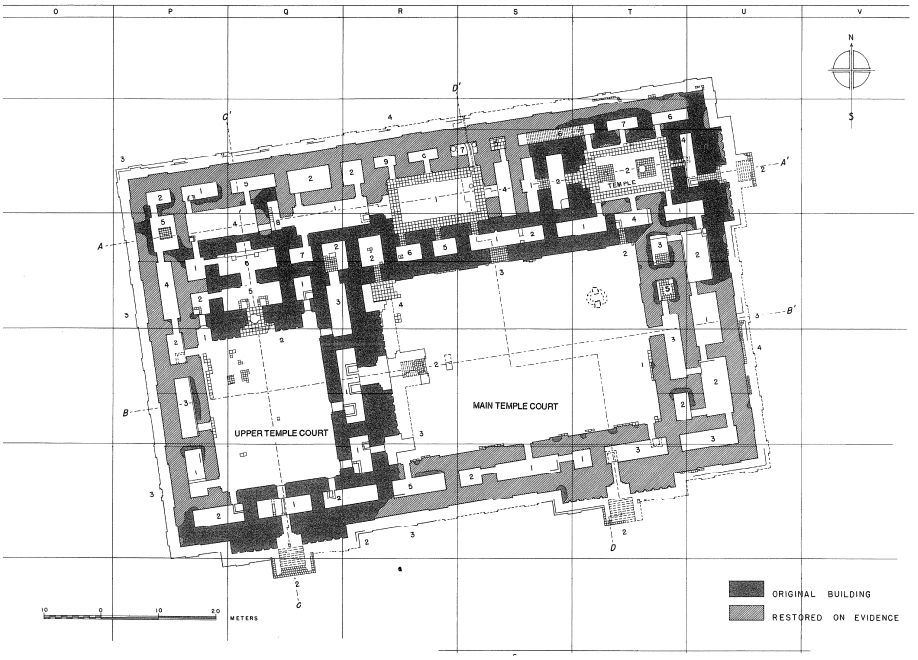


Fig. 35: The Kititum Temple at Ishchali

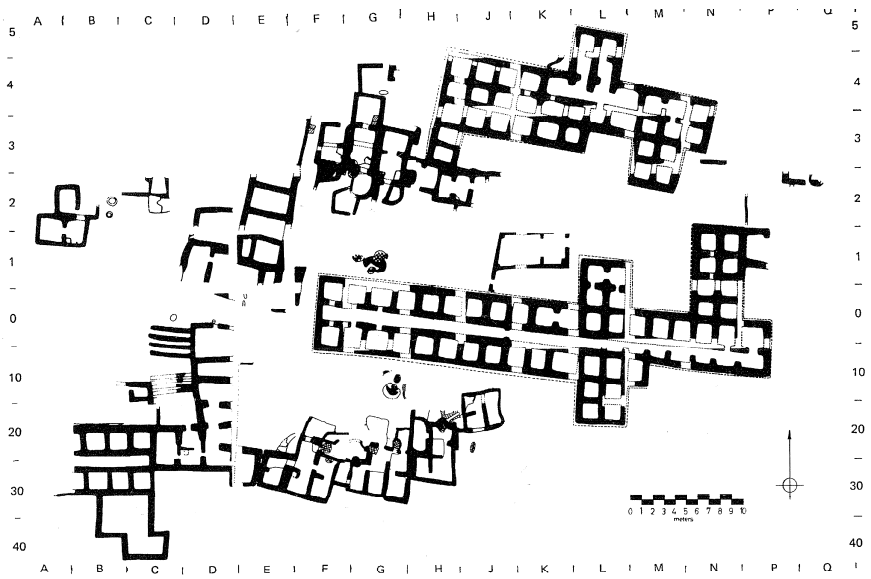


Fig. 36: Umm Dabaghiyah

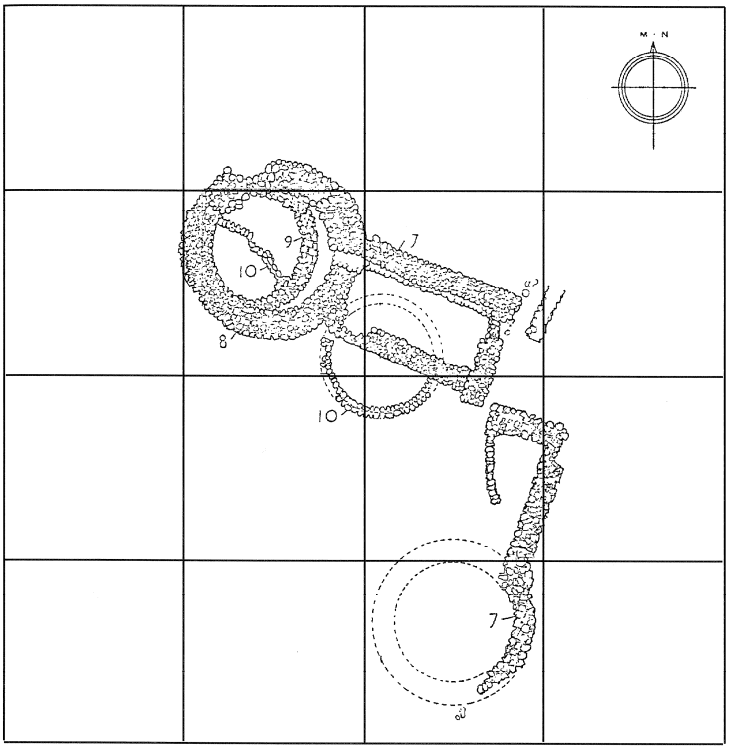


Fig. 37: Tell Arpachiyah

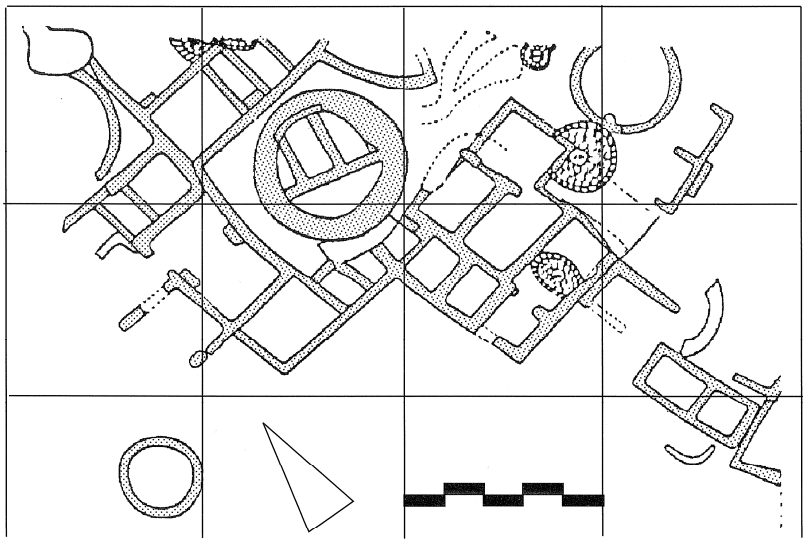


Fig. 38: Yarim Tepe

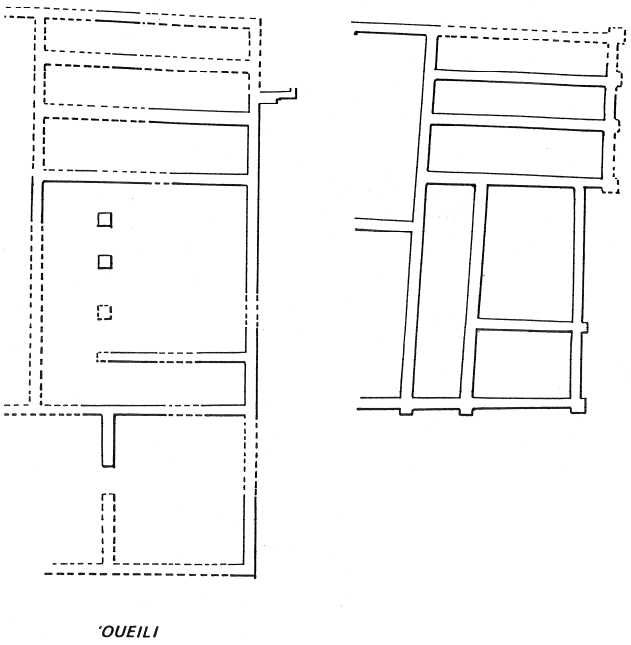


Fig. 39: Tell Oueili and Tell es-Sawwan houses

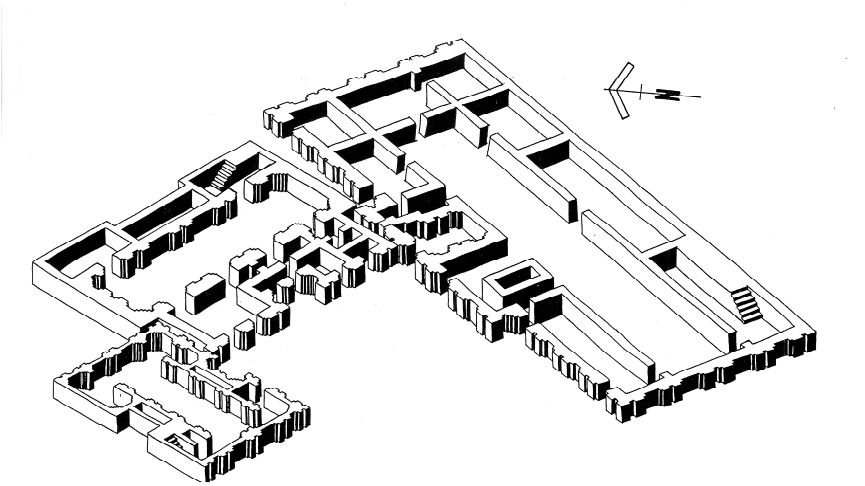


Fig. 40: Temples in level XIII at Tepe Gawra

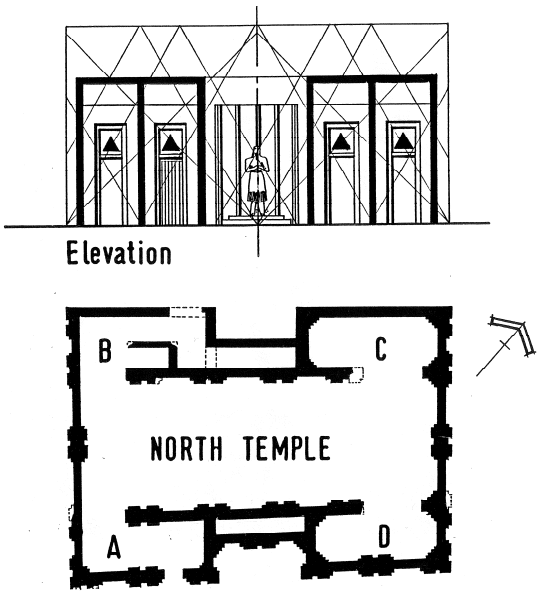


Fig. 41: The North Temple at Tepe Gawra

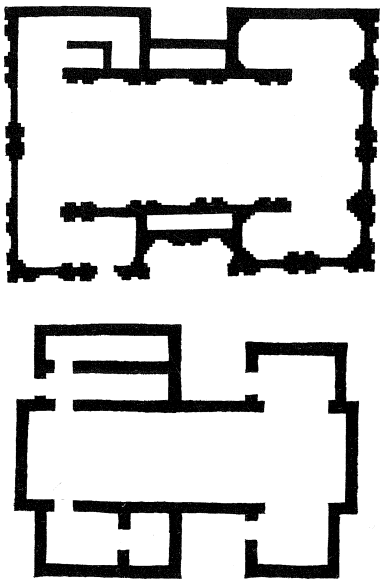


Fig. 42: Comparison between a building at Kheit Qasim and North Temple

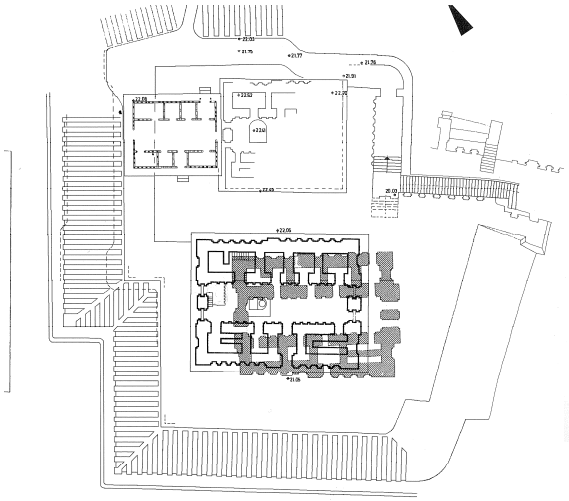


Fig. 43: White Temple at Uruk

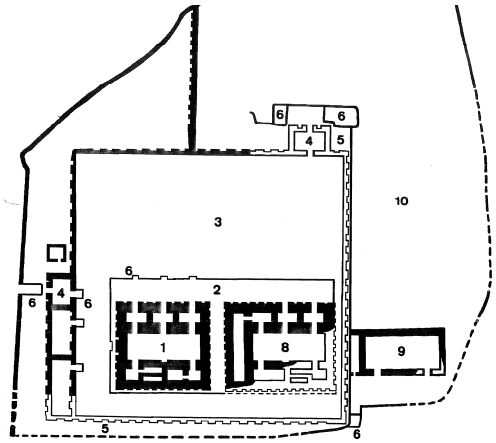


Fig. 44: Red Temple at Jebel Aruda

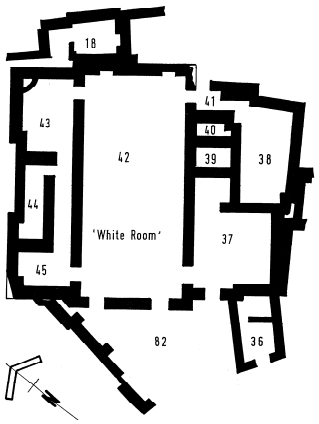


Fig. 45: White Room at Tepe Gawra

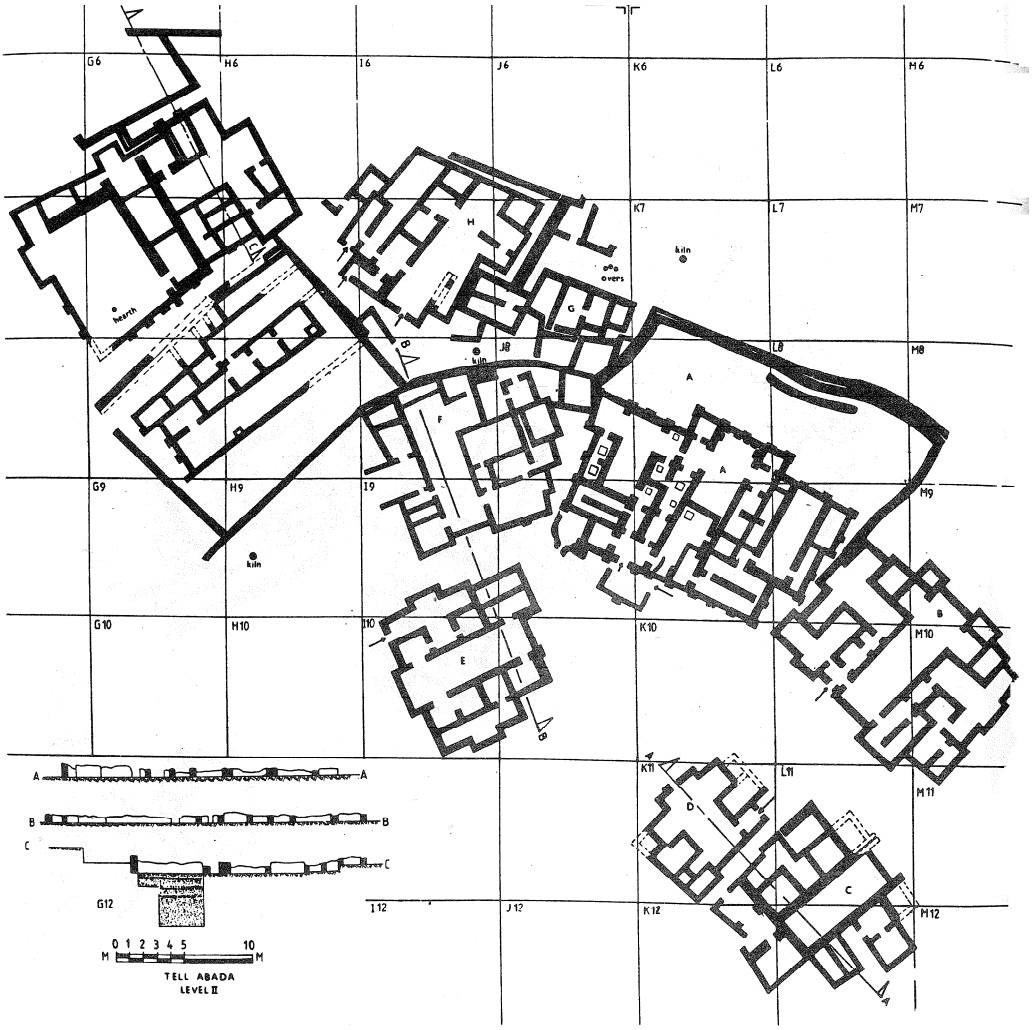


Fig. 46: Tell Abada

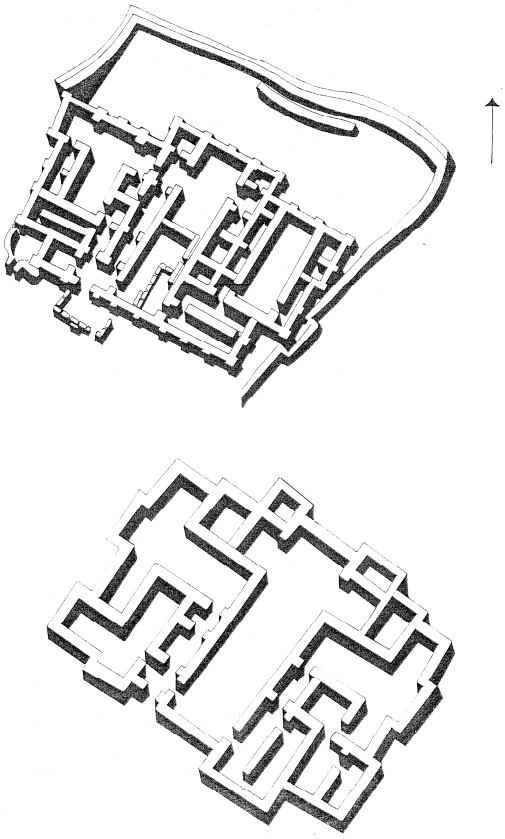


Fig. 47, 48: Houses at Tell Abada

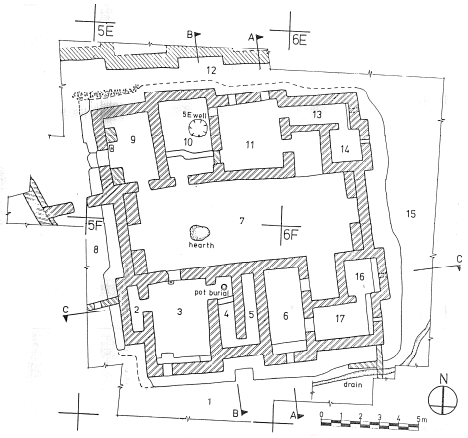


Fig. 49: Tell Madhur House

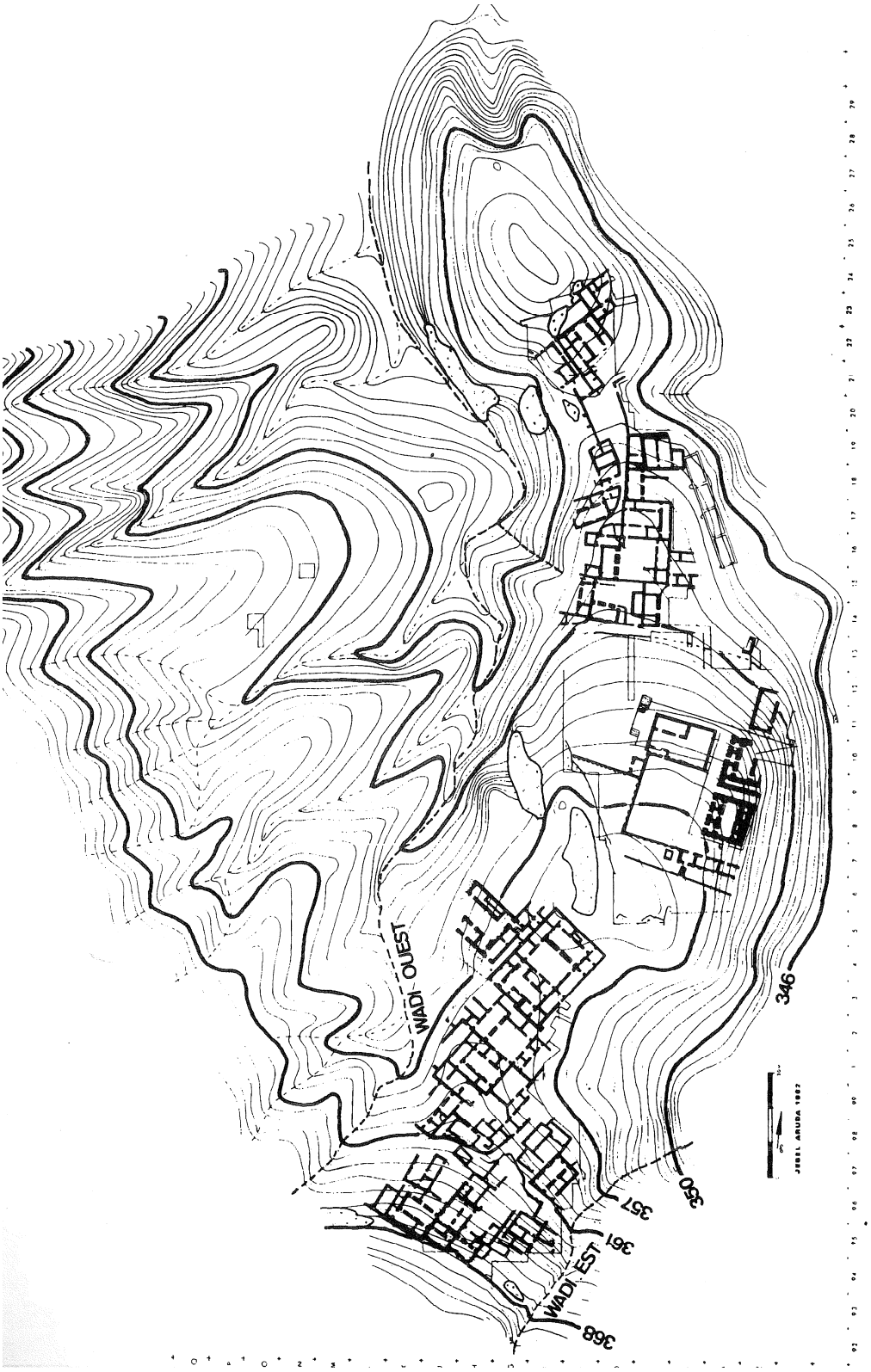


Fig. 50: Jebel Aruda

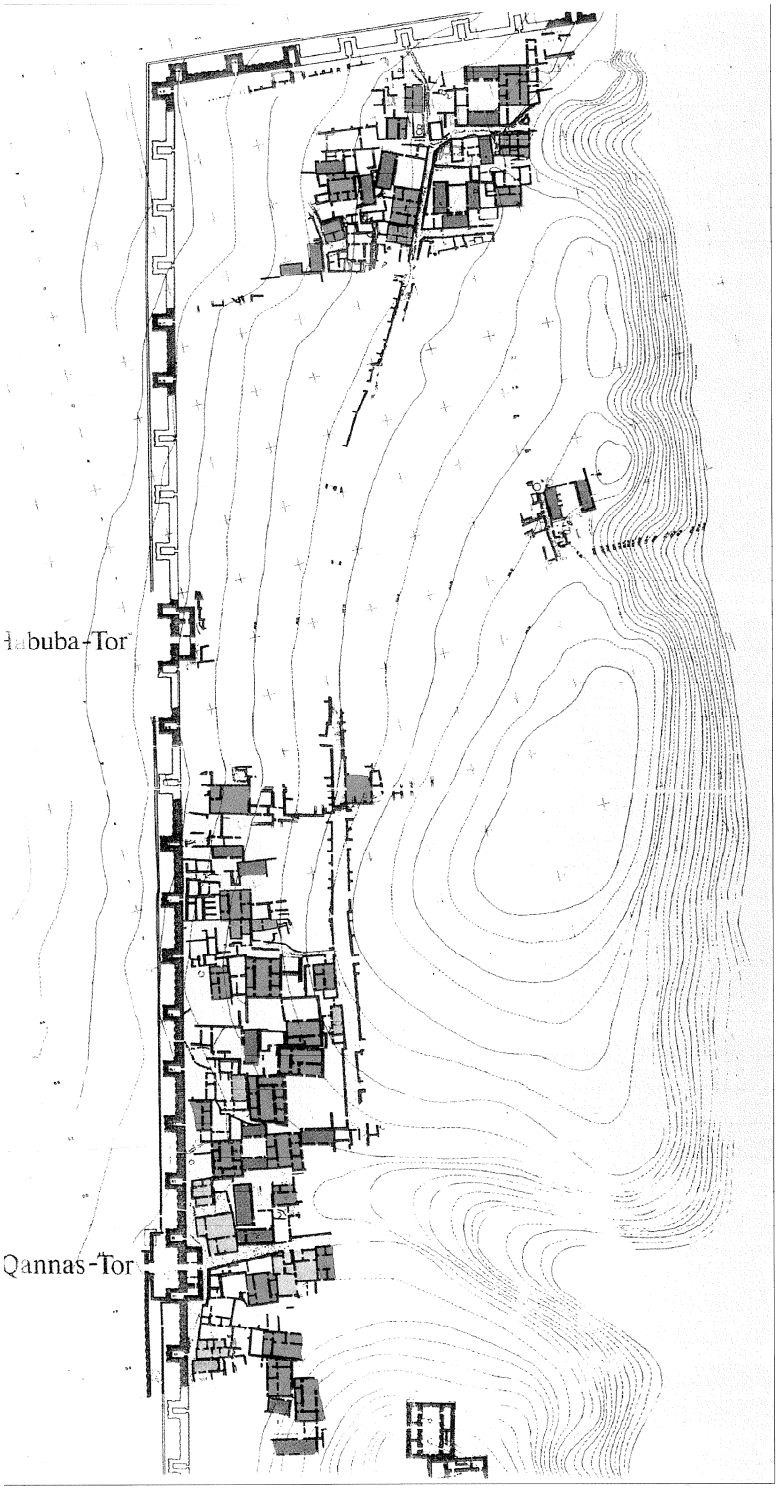


Fig. 51: Habuba Kabira

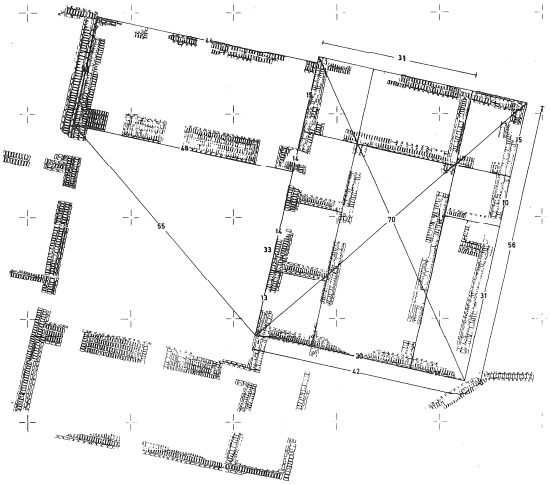


Fig. 52: Tripartite flanked hall building at Habuba Kabira

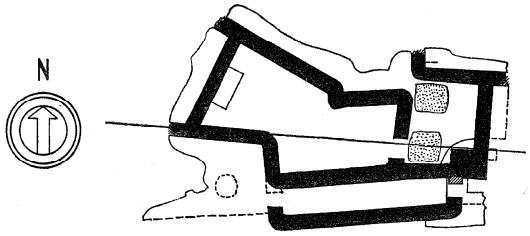


Fig. 53: Abu Temple at Tell Asmar (Earliest shrine)

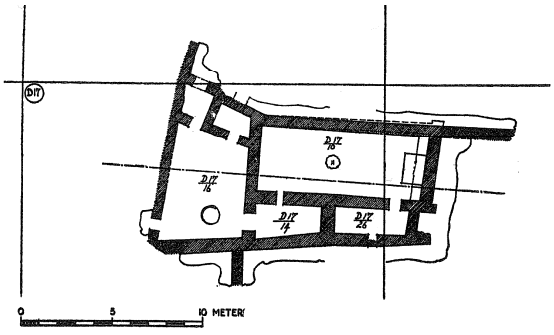


Fig. 54: Archaic shrine I

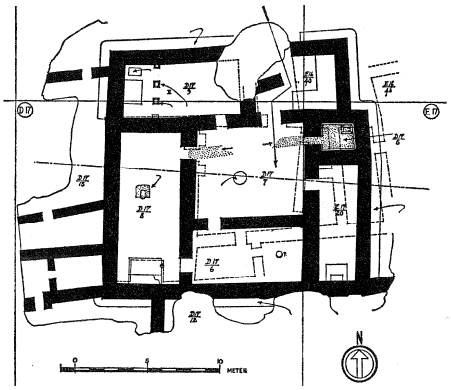


Fig. 55: Square Temple

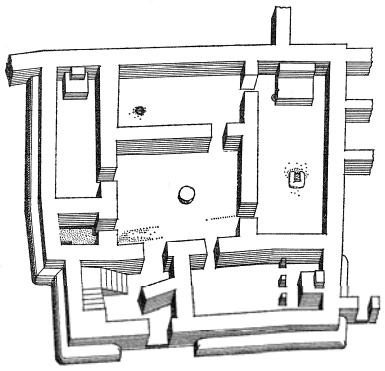


Fig. 56: Square Temple (Abu Temple) with its *kisu* wall

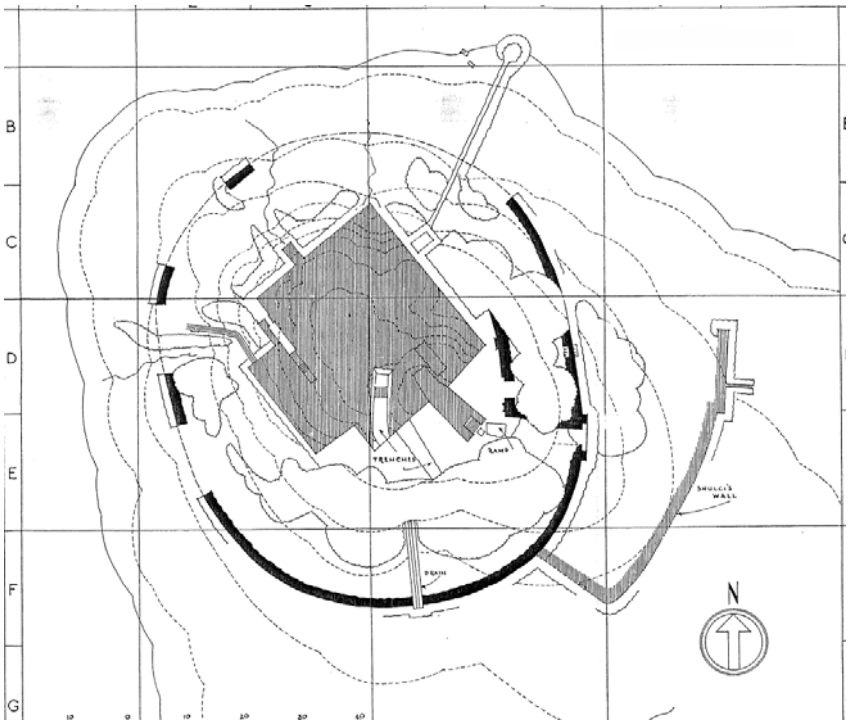


Fig. 57: Ninhursag temple at Al-Ubaid

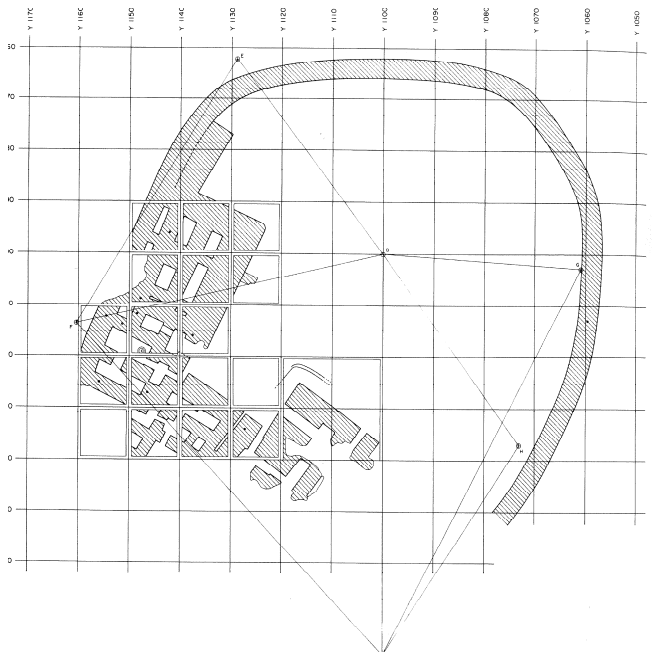


Fig. 58: Inanna Temple at al-Hiba (Lagash)

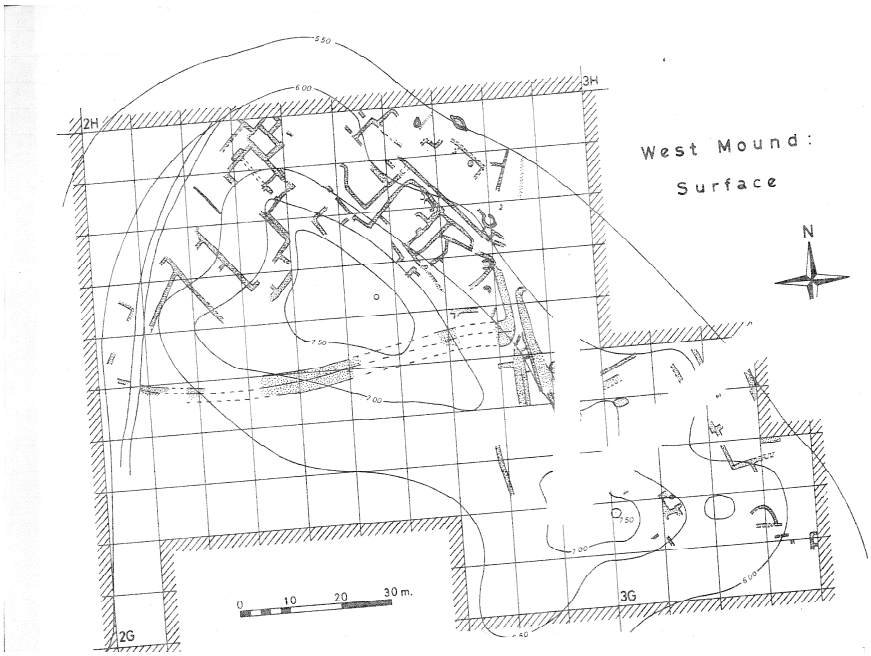


Fig.59: Abu Salabikh (west mound surface)

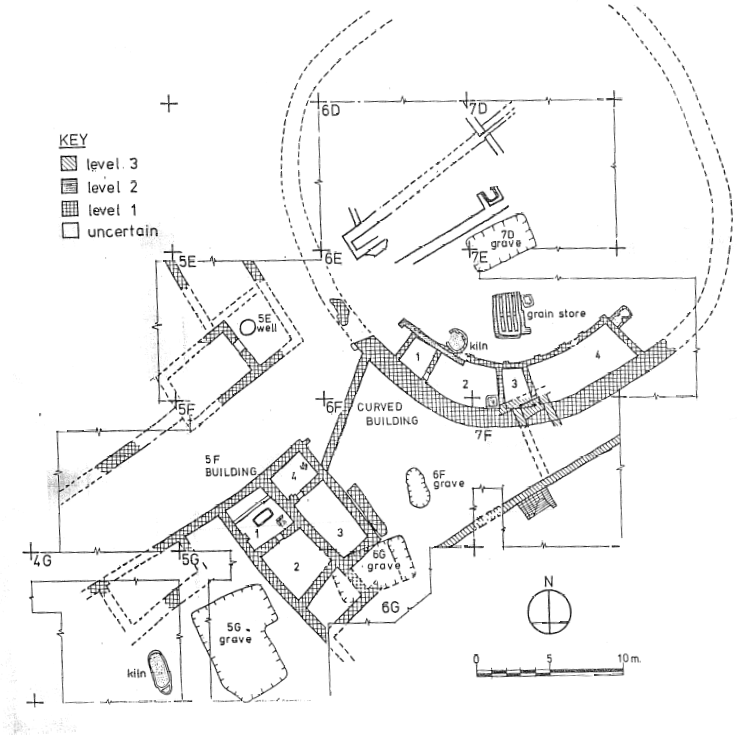


Fig. 60: Plan of Early Dynastic building at Tell Madhur

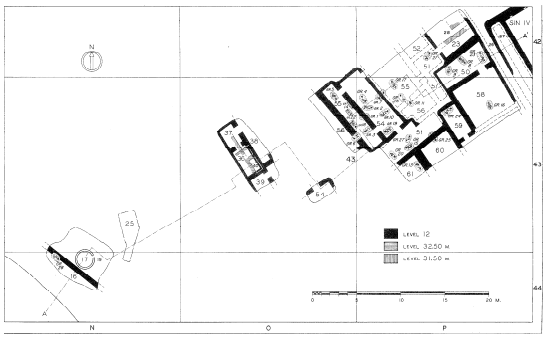


Fig. 61: Houses 12 at Khafajah

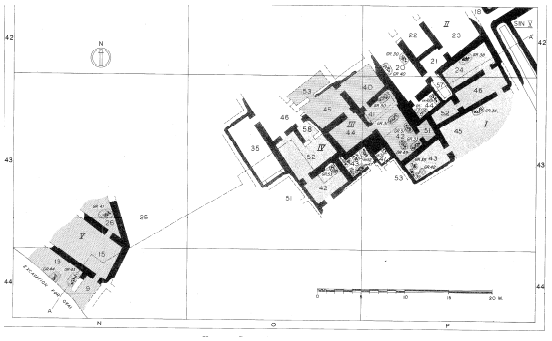


Fig. 62: Houses 11

Fig. 63: Houses 10

Fig. 64: Houses 9

Fig. 65: Houses 8

Fig. 66: Houses 7

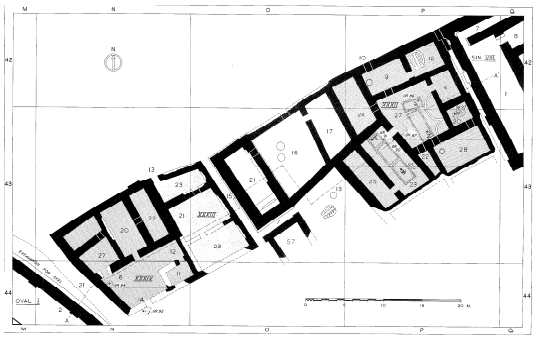


Fig.67: Houses 6

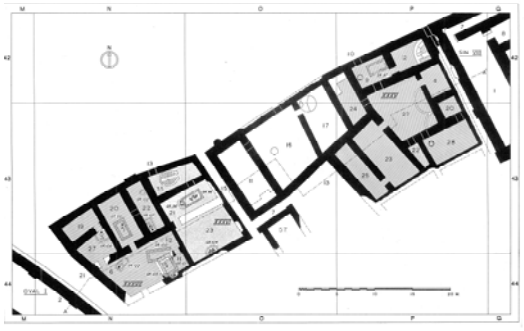


Fig. 68: Houses 5

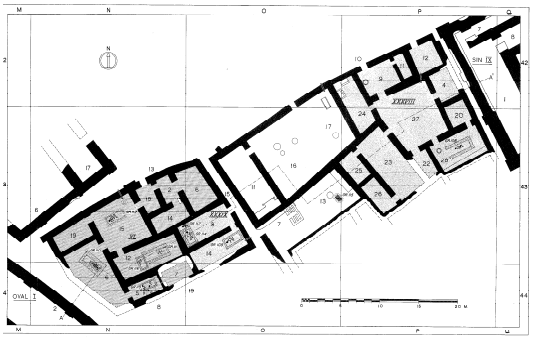


Fig. 69: Houses 4

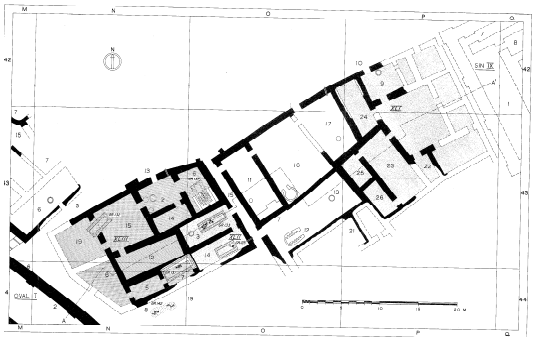


Fig. 70: Houses 3

Fig. 71: Walled Quarter

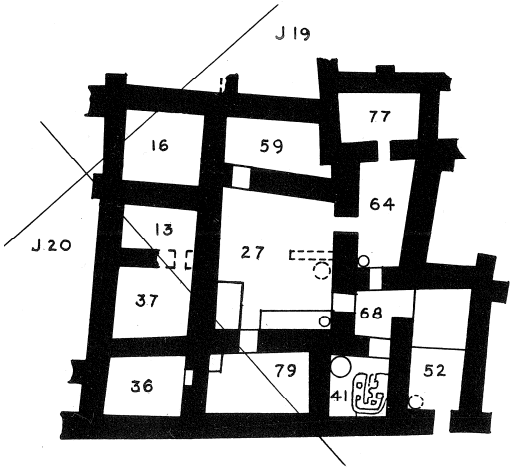


Fig. 72: Tell Asmar. Plan of Arch House (Stratum V c)

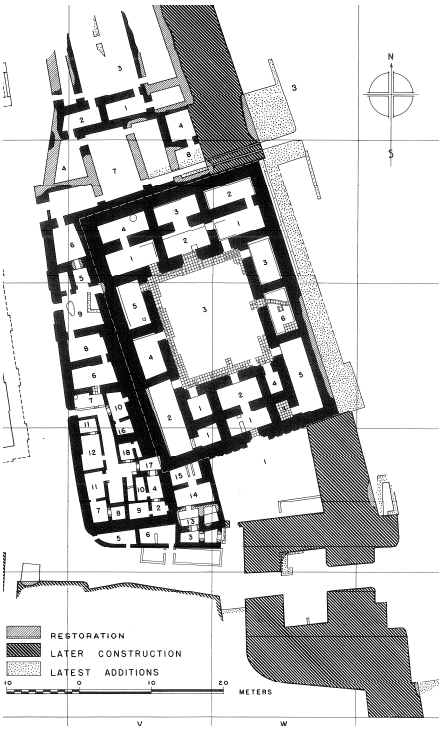


Fig. 73: Sin Temple of Ishchali

ΓΕ 120.

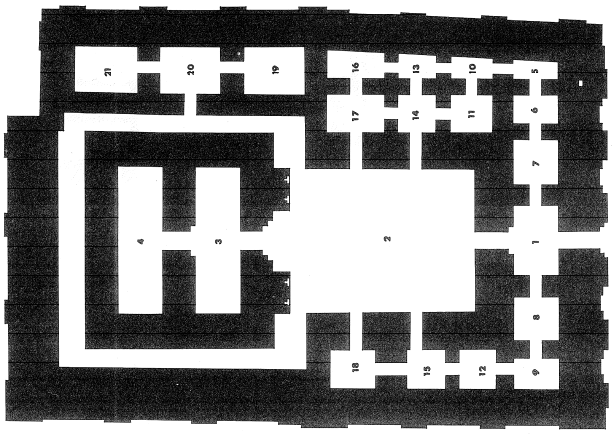


Fig. 74: Temple of Enki at Ur

Fig. 75: The AH site at Ur (Plan of Houses)

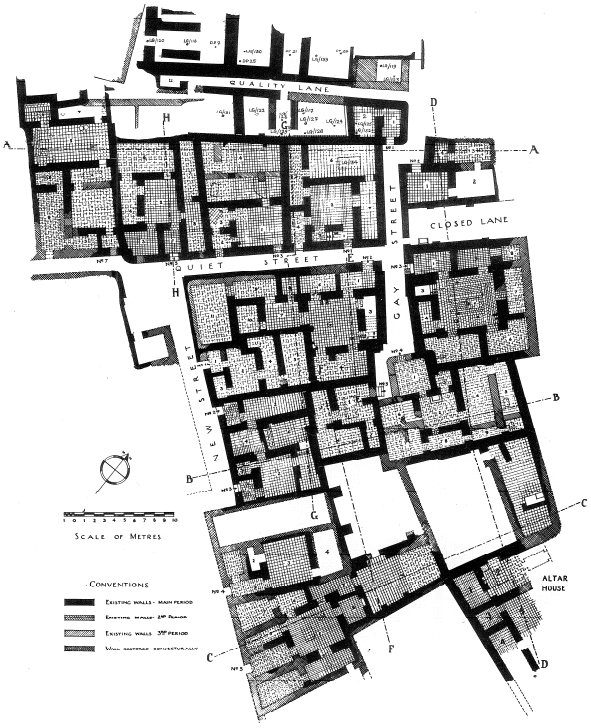


Fig. 76: The EM site at Ur (Plan of Houses)

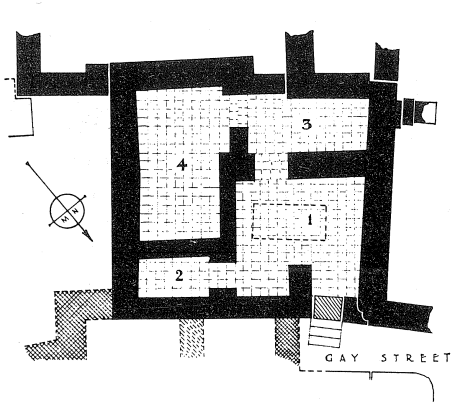


Fig.77: Plan of house No. 5 Gay Street

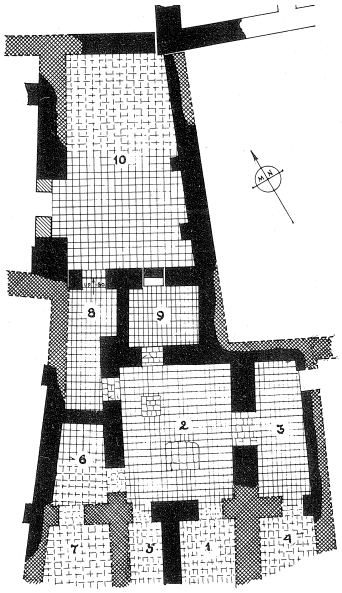


Fig. 78: Plan of house No. 5 New Street

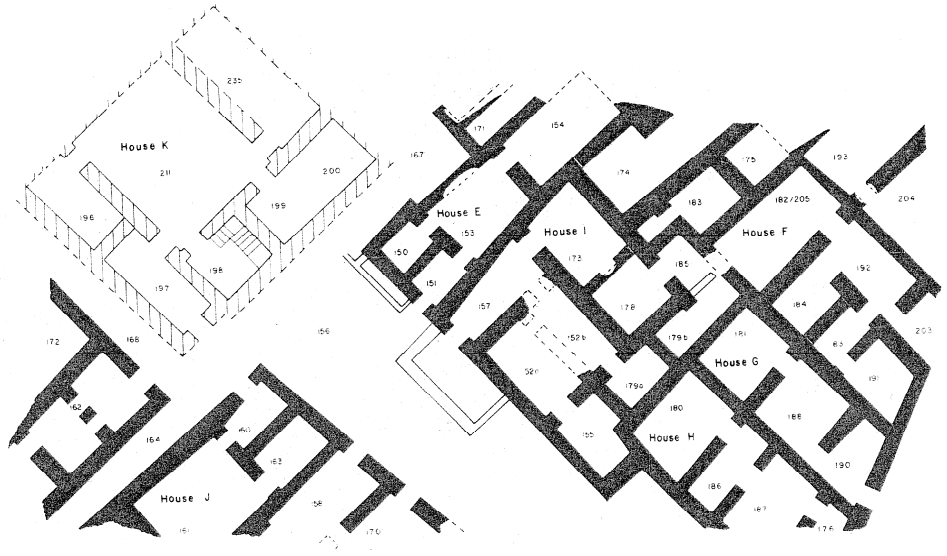


Fig. 79: Plan of TA area at Nippur

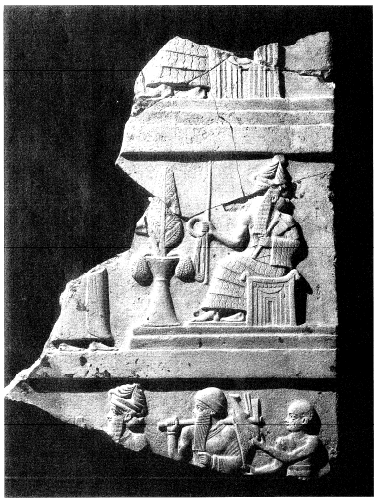


Fig. 80: Ur-Nammu stela

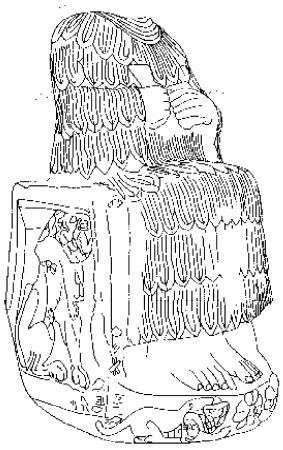


Fig. 81: Statue from Susa

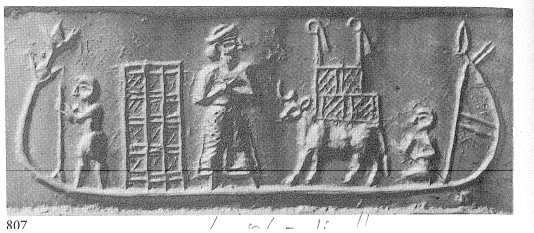


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Fig. 82: Seal (image of cult) from Uruk

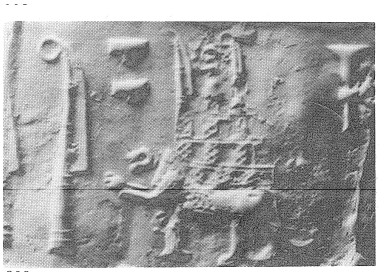

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Fig. 83: Seal (image of cult)